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THE CONCEPT OF INTERPROFESSIONAL COLLABORATION
IN BACCALAUREATE NURSING EDUCATION PROGRAMS
A DESCRIPTIVE SURVEY

by

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Approved by the Committee on the Degree of Doctor of Education

Date OCT 24 1977

Submitted in partial fulfillment of the requirements for the Degree of Doctor of Education in Teachers College, Columbia University

1977
ABSTRACT

THE CONCEPT OF INTERPROFESSIONAL COLLABORATION
IN BACCALAUREATE NURSING EDUCATION PROGRAMS
A DESCRIPTIVE SURVEY

Sylvia Kleiman Fields

In response to multiple social and political forces towards interprofessional collaboration in health care delivery, professional educators and others have espoused the need for educational programs which prepare future health practitioners for team practice.

A descriptive survey was conducted of National League for Nursing accredited baccalaureate programs during 1975 and 1976 to identify the current status of interprofessional learning for baccalaureate nursing students, to describe specific characteristics of these programs, and to identify the factors perceived as promoting and/or inhibiting interprofessional learning opportunities by nurse educators in programs providing such experiences and in programs not currently offering such opportunities.

The study was designed as a cross-sectional survey using parallel samples of nurse educators in schools with interprofessional learning and without interprofessional learning. Two mailed questionnaires were utilized to collect data describing interprofessional learning opportunities as well as perceptions of nurse educators relating to the promoting or inhibiting effects of administration, faculty, curriculum, students and resource factors on interprofessional learning opportunities.
A preliminary exploratory survey of two hundred forty-six accredited schools (with a 63 percent response) indicated that 37 percent had some type of interprofessional opportunity while 62 percent did not. Over eighty course titles were identified and categorized as Social Sciences and Humanities, Political Sciences, Clinical Focus Natural and Applied Science, Research Methods or General Health Topics. Students of twenty-five other health or related professions participated with nursing.

The literature review indicated the major factors interfering with interprofessional collaboration in practice and education to be concepts of autonomy and individualism inherent in professions and levels of professions where a hierarchy exists with stratification placing medicine at the top and others such as nursing with less years of education below.

Characteristics of 46 participating schools (26 with programs and 20 without), and their programs and the 201 nurse educators responding were described. Most described individual didactic courses related to social or political sciences offered by one school and open as electives to others. The most commonly offered course was Human Sexuality. A few clinical courses were described for small numbers of nursing students, usually related to health assessment and team practice where they most frequently participated with medical students.

Factors related to faculty—ineffective time, loss of interest, disagreements over objectives, philosophical incompatibility, and scheduling difficulties were identified as most influential in discontinuation of courses.

Nurse educators in all schools indicated effects of interprofessional teaching and learning were highly positive on faculty and stu-
dent. They agreed that students needed to learn together from the beginning, but also recognized that nursing students benefited from role sophistication before exposure to interprofessional activities, and that faculty must learn to work together first.

Significant factors identified as promoting interprofessional learning were perceived to be: institutional philosophy and objectives, nursing faculty attitudes and abilities, student abilities and attitudes, nursing program philosophy, and resources. The major inhibiting factors reported were nursing faculty "time" and funding.

Some differences in perceptions among groups were identified through Chi Square statistic, but these were primarily differences in levels of "agreement" "disagreement," or "don't know."

The most influential factor towards interprofessional learning for nursing was the presence of a school of medicine on the same campus.

The study raised several questions. What are the real benefits of interprofessional practice and learning? Why are our attempts at collaborative education not working? Should interprofessional learning be at the graduate not the undergraduate level?
ACKNOWLEDGMENTS

There have been many individuals who deserve special thanks from me for their encouragement, guidance and support throughout the past twenty-five years as I have struggled to combine nursing professional/ and teaching careers, advancing educational achievement with the raising of three delightful offsprings. Without their help this project would never have been completed.

First of all I want to thank my parents and brother, Frieda, Irving, and Norman Kleiman who taught me to never give up. It has been their continuous loving support throughout my life, with their assurance that one could accomplish anything in life one aspired to if only one would work hard enough, that provided the incentive and the drive - "to be."

To the late Margaret T. Shay, former Dean, School of Nursing, Adelphi College who helped me "buck the system" and who maintained "student rights" much before the time, my return on her investment.

I shall never forget Frances K. Reiter, may she rest in peace, who helped me achieve the master of arts degree at Teachers College in 1960 while pregnant and holding two jobs. Her philosophy of nursing will always be a great inspiration to me.

I want to thank the great ladies of nursing who have personally influenced me so significantly, Edythe L. Alexander, Mildred Montag and Eleanor Lambertsen, because they kept saying "go on - you can do it."

Without the driving inspiration and exciting dynamism of my dean, Ellen T. Fahy, and the encouragement of my friend and co-author Jacque L. Sherman Jr., the drive across Long Island to Teachers College would have been impossible.

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S. K. F.
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CHAPTER I

INTRODUCTION

It is well established that a health care crisis exists in this nation; that there is unequal distribution of health care services; and that health services manpower are not being utilized to their fullest potential for alleviation of that crisis.\(^1\), \(^2\), \(^3\)

With an increasing knowledge explosion and technological development we have seen the development of new specialists and the proliferation of new health occupations. Functions of older professions have shifted and there is role blurring and overlap, with the responsibilities of one profession sometimes being transferred to another. No one health practitioner can provide total care. Each discipline possesses unique capabilities, knowledge, and each shares some knowledge and abilities.\(^4\)

As social scientists, legislators and leaders of the health professions explore the possible routes toward an improved system of Health Care Delivery various recommendations emerge.

\(^1\) Madeleine Leininger, "This I Believe...About Interdisciplinary Health Education for the Future," *Nursing Outlook*, XIX (December, 1971), 787-791.


One method proposed for improving the delivery of health care has been the development of interprofessional teams. Collaborative practice theoretically allows the health care team to function more effectively to meet the complex needs of the client as it places emphasis upon comprehensive health care services for each consumer.

This proposed teamwork of the different health professions becomes an almost absolute necessity not only to meet the needs of the people by integrated understanding of their problems but also to allow the various professionals to become familiar with the complimentary techniques connected with the practice of their profession.¹

Professional nursing practitioners have been asked particularly to develop a role as the representative of client interests in interprofessional approaches to health care services and nursing educators have been asked to prepare students of the profession for that role.², ³

The National League for Nursing, taking a position on interdisciplinary and interprofessional planning for nursing education and nursing practice in the seventies, has recommended that nursing education become more flexible by increasing collaborative efforts and cooperation with other health professions.⁴

A specific goal identified has been the need for nursing students to share learning experiences with students from other health profes-


⁴National League for Nursing, Nursing Education in the Seventies: A Statement by the Board of Directors, February, 1972.
Students need to study and work together to know, respect and facilitate the contributions of different disciplines, to work together on a number of common health problems, and to reduce professional dominance and stratification.\textsuperscript{1}

In order to facilitate interdisciplinary education and practice, an atmosphere of shared communication and interactional opportunities based on respect and concern for one another should be established from the beginning.\textsuperscript{2}

The education of different health professionals to serve in health teams is certainly a challenge for our educational institutions since the tradition of our medical world has not moved in this direction. Traditionally the responsibility for the training of different health workers has remained scattered among unconnected organizations. Pharmacists, physicians, dentists and nurses all have difficulty in adapting their training programs to facilitate interprofessional student learning during the formative years.

The basic cultural values of each health profession, especially deeply rooted in those of long standing such as medicine, social work and nursing appear to interfere with efforts towards effective teamwork. Multiple factors may intervene such as differences in educational preparation, sex roles, stereotypes of relationships as well as the very definition of "profession" which implies autonomous practice.

For example (as a result of metamorphosis during the past quarter century) baccalaureate nursing programs have been traditionally designed

\textsuperscript{1}Leininger, "This I Believe...About Interdisciplinary Health Education for the Future," p. 791.

\textsuperscript{2}Ibid.
to assist the student toward achieving the specific goals of the nursing profession as an independent one. Nursing Education in this country had originally been developed as hospital training programs where physicians did much of the teaching. With a stereotype of the nurse as the physician's handmaiden, it has taken almost a revolution to release nurse training from dominance of medical authority. If not a revolution, at least two world wars, the Civil Rights movement, Women's Rights movement, Equal Rights Amendment, and a whole era of federal involvement in education and health care have been necessary to effect change in the original model for nurse education from hospital to community.

Today theoretical and conceptual knowledges as well as practical are being developed and clinical experiences selected by nurse faculty alone. While the profession has been fighting an upward social, political and legal battle to develop and sustain its independence, and prevent dominance by the other major health profession, nursing educators have not unanimously agreed with the recommendations of those advocating interprofessional collaboration in nursing education. We know, however, that no health professional can function today in true independence and that interdependence is essential. The potential threat to that degree of independence which we now maintain is forever present.

Although individual professors, practitioners, and students of the various health professions have expressed a need for interprofessional learning opportunities, and although the potential benefits of planned multidisciplinary input in the educational process seem apparent, for the most part present health professional educational programs are based upon the premise that each profession is an independent one with an educational format which permits little involvement of other profes-
The wide diversity of strategies for organization, sequence, content, and practice continues therefore as a basic right provided to individual faculties within the framework of guidelines established by professional associations as well as national and regional accrediting bodies.

It is no surprise therefore that given the very real constraints of traditionalism and professionalism, interprofessional education has not established itself within the system of professional education in this country.

Statement of the Problem

With all that has been written espounding efforts towards interprofessional collaboration in health care education, relatively few programs have been established and evaluated as effective methods for the education of future health care teams for multidisciplinary practice. The literature has not been filled with documentation of successes and research has been at a minimum. What, therefore, are the factors which have promoted or inhibited interprofessional efforts at the basic professional level? Although we may hypothesize that this factor or that may influence such efforts no clear indication of the major factors emerge.

The problem to be explored was: What factors do nurse educators perceive as promoting or inhibiting interprofessional collaboration for health care education at the professional level?

**Purposes of the Study**

The purposes of the study were to:

1. Identify the current status of interprofessional learning opportunities for baccalaureate nursing students as reported by nursing educators.

2. Describe specific characteristics of programs with interprofessional learning for baccalaureate nursing students.

3. Identify factors reported as promoting and inhibiting interprofessional learning opportunities by educators in programs providing such experiences.

4. Identify factors reported as promoting and inhibiting interprofessional learning opportunities by educators in programs not providing such experiences.

5. Provide information which may be helpful to administrators and faculty in planning for, and/or evaluating such opportunities.

**Need for the Study**

Although the National League for Nursing has recommended in its criteria for accreditation that nursing students have learning experiences with students in other fields of study, there has been no mandate for interprofessional learning.

Across the country, however, there has been movement particularly in the past five years toward introduction of interprofessional courses of study both in the classroom and in clinical practice settings for students of nursing, medicine, social work, pharmacy and others.

These opportunities apparently range from brief incidental learning experiences (which have existed in hospitals and university health
centers for years) to programs in which interprofessional learning is perhaps the core of the curriculum. Therefore, as more colleges and universities explore the feasibility of developing such curricula, and programs become viable, problems are identified, and much variation in the content, learning experiences and effects upon student and faculty occur.

There has been, however, no systematic attempt to gather descriptive evidence regarding these programs. Descriptive data would (a) help to clarify the nature and characteristics of such programs; (b) identify common problems and methods of successful problem solving; (c) provide information which may be helpful to administrators and faculties in planning for such programs, and/or for evaluating existing programs.

**Design of the Study**

This study was designed to explore and describe multiple factors relating to interprofessional learning for students of the health professions.

Initially the study sought to discover the distribution of interprofessional learning programs in which baccalaureate nursing students were participants. Two mailed questionnaires became the tools for the cross-sectional survey using parallel samples of nurse educators in schools with programs of interprofessional learning and in schools without such programs.

**Assumptions**

The responses to the mailed questionnaire represented the actual practices and perceptions held by nursing educators.
Limitations

Questionnaire techniques in no way control nor assure the depth to which questions are answered.

A volunteer sample may limit the generalization possibilities of the study. Inability to observe programs may be considered a limitation.

Only faculty of schools accredited by the National League for Nursing baccalaureate programs were invited to participate.

This study did not attempt to place a positive or negative value on the provisions of interprofessional collaboration in health care education.

Definitions

Interprofessional Collaboration. Cooperation between two or more professionals in problem solving activities of interest to the practice of each profession.

For this study interprofessional collaboration related primarily to health care professions, i.e., nursing, medicine, social work which are most likely to practice together with clients.

Interprofessional Learning Experiences. Planned and directed didactic and/or clinical practice opportunities whereby students of two or more professions share problem solving experiences of interest to practice in each profession.

For this study interprofessional learning experiences related to learning activities other than those in the basic natural sciences, basic social sciences or humanities.

Interdisciplinary Learning Experiences and Interprofessional
Learning Experiences were used synonymously for this study.

Nurse Educators. Individuals who assume primary responsibility for educational preparation of students in baccalaureate nursing programs, who hold licensure as a professional registered nurse with a minimum of a masters degree. These individuals were employed full-time by an accredited educational institution.

Baccalaureate Nursing Students. Students enrolled in an educational program leading to the professional practice of nursing and the baccalaureate degree.

Conceptual Framework

The concept of interprofessional collaboration provides the conceptual framework for this study. The concept of collaboration relates to utilization of problem solving techniques, as individuals are involved in the process of working together for common goals. When members of two or more practicing professions seek to define goals of mutual concern and to develop mutually satisfactory working relations, interprofessional collaboration occurs. Implicit are understanding of professional and individual skills, and of knowledge of the characteristics of one's self, and one's associates.

It requires the willingness and maturity to share, to adapt, to listen, to communicate directly and openly about one's feelings, thoughts, and differences and to be sensitive and responsive to one another's expectations. . . . Collaboration must include a system and processes which provide for convergence toward goals through joint problem solving.2

---


The concepts of "profession," "professionalism," and "professionalization" are basic to the framework selected and will be discussed at length in the review of literature.

Plan of the Report

I. Introduction
   Social, and Philosophical Influences
   Statement of the Problem
   Purposes of the Study
   Need for the Study
   Design of the Study
   Assumptions
   Limitations
   Definitions
   Conceptual Framework

II. Review of the Literature
   Professions and Professionalism
   Professionalization
   Factors Promoting and Inhibiting Interprofessional Collaboration
   Interprofessional Collaborative Education Programs

III. The Research Study
   Preliminary Exploratory Study
   Selection of Research Sample
   Methods of Data Collection
   Analysis of the Data

IV. Presentation and Analysis of Data
   General Information Describing Participating Schools
   Description of Interprofessional Learning Programs
   Description of Nurse Educator Respondents
   Factors Perceived as Promoting and Inhibiting Interprofessional Learning by Nurse Educators
   Factors Influencing Establishment of Interprofessional Learning

V. Interpretation of the Study
   Summary, Conclusions and Implications
   Recommendations for Further Study

VI. Bibliography

VII. Appendices

Summary

This chapter has given an overview of the research problem,
purposes, and the processes of the study

It has provided a review of the social and philosophical influences underlying the research problem, as well as a brief description of the design of the study. An introduction to the conceptual framework of interprofessional collaboration has also been included.

In Chapter II a review of selected literature pertaining to interprofessional collaboration, and including profession, professionalism, professionalization, and interprofessional collaborative educational programs will be explored.

In subsequent Chapters, III, IV, and V, the research methods, research findings with analysis and discussion, and finally interpretation with recommendations for further study will be presented.
CHAPTER II

INTERPROFESSIONAL COLLABORATION

Introduction

This chapter will present a review of selected literature related to the concept of Interprofessional Collaboration. It will include discussion of profession, professionalism, professionalization, interprofessional and collaboration and descriptions of interprofessional educational programs developed in this country and in Canada.

Although there has been much said about the need for interdisciplinary work among professionals, Shein\(^1\) states that "rarely do we find a clear analysis of why such interdisciplinary collaborative work is so infrequent and so difficult."

Since the professions are a set of occupations that have developed a very special set of norms deriving from their special role in society, before we can define, describe, and explore thoroughly the concept of interprofessional collaboration, it is perhaps essential to analyze the component parts and related structures which lead to the concept. The root word here is "Profession," therefore definitions, descriptions and characteristics of "profession" "professionalism," and "professionalization" are germane to the discussion.

Profession and Professionalism

What is a profession? According to the Oxford Universal Dictionary definition, appropriate to the study, profession means:

The occupation which one professes to be skilled in and to follow. (a) A vocation in which a professed knowledge of some department of learning is used in its application to the affairs of others, or in the practice of an art founded upon it. Applied specifically to the three learned professions of divinity, law, and medicine; also to the military profession. (b) In wider sense: any calling or occupation by which a person habitually earns his living. (c) The body of persons engaged in a calling.1

There can be no doubt that this alone is not enough. The following authors have attempted to define and describe professions, professionalism, and professionalization. They offer contributions to our understanding of the concept of interprofessional collaboration, and give insight into the factors which promote interprofessional relations and those factors which serve as barriers to interprofessional collaboration.

A definition of "Profession" offered by Cogan emphasizes the service component.

A profession is a vocation whose practice is founded upon an understanding of the theoretical structure of some departments of learning or science, and upon the abilities accompanying such understanding. This understanding and these abilities are applied to the vital practical affairs of man. The practices of the profession are modified by knowledge of a generalized nature and by the accumulated wisdom and experience of mankind which serve to correct the errors of specialism. The profession, serving the vital needs of man, considers its first ethical imperative to be altruistic service to the client.2

Ernest Greenwood states that "professions" are distinguishable by possession of:


1. A basis of systematic theory;
2. Authority recognized by the clientele of the professional group;
3. Broader community sanction and approved by this authority;
4. Code of ethics regulating relations of professional persons with clients and with colleagues;
5. A professional culture (its values, norms, and symbols) sustained by formal professional associations.¹

Greenwood further states that the standards for professional performance are reached by consensus within the profession and are based on the existing body of theoretical knowledge. It is for this reason that evaluation of the professional is best accomplished by his peers. "The ethics governing colleague relationships demand behavior that is cooperative, equalitarian and supportive."²

Goode³ also lists the characteristics of a profession.

1. Autonomy in practice;
2. Organization of members;
3. Prolonged special training in a body of abstract knowledge;
4. Service orientation and acceptance and recognition of society which results in high income and/or leadership positions.

"The service orientation" means that the professional decision is not

²Ibid, p. 15.
properly based on the self interests of the professional but on the needs of the clients—however, the practitioner decides what the client needs. In addition, Goode points out that a profession must not only possess and use knowledge, but must help to create it.

The key characteristics described therefore of professional groups are: the degree to which they have established their roles and functions autonomously, the extent of their special knowledge and skills which society deems valuable and rewards with status and financial benefit, their society given right to collectively control their own standards of performance and behavior as well as a commitment to development of new knowledge through research.

When attempting to distinguish which occupations are professions and which are non-professions clear cut distinctions are frequently difficult to be made. Greenwood recommends that we think of the occupations in society as distributing themselves along a continuum. An occupation, therefore, may be professional if it meets all the criteria identified, or not professional to a greater or lesser degree.

Etzioni defines the basis of professional authority as knowledge. He further explains the continuum by classifying professions with five years or more of training as true or "pure" professions and those with less as "semi"-professions. The "pure professional" organizations, Etzioni declares, are primarily devoted to the creation and application

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1 Ibid.
of knowledge; their professionals are usually protected in their work by the guarantee of privileged communication and are often concerned with matters of life and death. The semi-professions are more concerned with the communication and to a lesser extent, the development and application of knowledge. Their professionals are less likely to be guaranteed the right of privileged communications and they are rarely directly concerned with life and death.

Etzioni makes still another distinction which is interesting to consider. Since he emphasizes that the basis of professional authority is knowledge (hence the years of training as a significant factor) he notes that with additional training and education the more professional, therefore, the more independent the individual becomes. Among social workers, for example, the masters degree tends to change the orientation from an occupational one to a more professional one: the greater the tendency of orientation to the social work "profession," and not to the employing agency.

Hughes\(^1\) also states that it is the American ideology that the longer one has to go to school for a profession, the higher the profession's standing. Medicine, according to Hughes, takes highest honors and with it the highest income for its practitioners.

The length and in a large part, the quality of professional education in the United States, are determined, not by law, but by voluntary professional associations, specialty bodies and associations of professional schools. While the standard education for the professions is the bachelor's degree plus some years of professional school, it has not

been completely realized in any professional group quite as completely as in medicine.

Hughes also stresses that deeply ingrained individualism is "endemic to the professions since their origins."1

Moore2 describes a "Scale of Professionalism" which represents an ideology and associated activities that can be found in many and diverse occupational groups where members aspire to professional status. The degree to which members of the group achieve professional status depends upon their degree of security and accomplishments of those identified activities.

Moore's Scale of Professionalism

1. A professional practices a full/time occupation which is his principle source of income.

2. There is a commitment to a calling which has a required set of normative and behavioral expectations.

3. The occupation exists within a formalized organization where there is a common commitment by those engaged to protect and enhance its interests.

4. The knowledge and skills attained by members require a specialized education or training of exceptional duration and difficulty.

5. The primary orientation is service to society.

6. Autonomy of the professional is restrained by responsibility and accountability.

George Strauss stresses the four major themes of professionalism, "expertise," "autonomy," "commitment," and "responsibility."

1 Ibid., p. 37.

Professionalism may be a necessary constituent of professionalization, but professionalism alone is not a sufficient cause for the entire professionalization process.¹

There are a group of occupations, such as: education, nursing, social work, and physical therapy which are classified by virtue of their rating on the scale of professionalism, as not fully professionalized, and it would appear that among others it is the privilege of "autonomy" which these individuals especially do not possess.

According to Shein² the degree to which a profession is professionalized depends also in large part upon the setting in which it is practiced and the manner in which performance is therefore controlled.

Semi professional workers, Etzioni³ reminds us, have less autonomy, a work day tightly regulated by the employing organization with duties at work comparatively highly specified. Nurses, he says, are directly observed during their work and corrected by physicians, administration and superior nurses. Such supervision is not characteristic of the mechanisms of control found in the full fledged professions.

Shein emphasizes that this distinction in work setting influences the professional's self image, his definition of client and his conception of the proper way to relate to the client.⁴

Professionalization

The process of socialization into an occupational group encompasses

¹Vollmer and Mills, eds., Professionalization, p. 8.
²Shein, Professional Education, p. 10.
³Etzioni, Modern Organization, p. 87.
⁴Shein, Professional Education, p. 12.
background education (sometimes called pre-professional) and job specific training (sometimes called professional) whereby the person takes on the skills and values of a particular occupation.¹

Vollmer and Mills further explain that in highly professionalized occupations much of the conformity to occupational roles is achieved by an especially thorough internalization of occupational expectations among those who pursue the occupation, with great emphasis placed on individual responsibility through the process.² This process is known as professionalization and may apply to individuals or to entire groups.

An individual typically moves through a rather extensive period of socialization during which he develops a commitment to a professional career. During this period, which includes his formal education as well as the period after graduation from a professional school, an individual assumes a professional image which becomes a very significant aspect of his self concept.³

New practitioners must perceive the multiple expectations that characterize his role and must acquire complex skills needed to match those expectations. He must learn the values of his profession in general and in specific, he must puzzle through many dilemmas before experience results in moral decisiveness. He must act in the presence of others, perceive their evaluations of his performance and find his assertions of identity confirmed.⁴

The development of this professional self concept involves a

¹Vollmer and Mills, eds., Professionalization, p. 8
²Ibid.
⁴Ibid.
complicated chain of perceptions, skills, values, and interactions. In this process a professional identity is etched which is believable both to the individual and to others, and particularly strengthening to the professional self esteem and self realization. The ultimate criterion of professionalization is achievement of "Autonomy."

Mac Iver states that "Professional Groups" refers to associations of colleagues in an occupational context where we observe that a relatively high degree of professionalization has taken place. All social groups develop ethics, norms or standards of behavior with regard to other members within the group, but it is especially characteristic of professional groups that they develop ethics and standards with individuals outside the group, primarily the client the professional serves and secondarily, the members of other professions.

Theoretically these ethics and standards in outside relationships are in terms of the service orientation based upon the needs of the client not upon those self interest needs of the professional, however, it is the professional who usually determines what it is the client needs. Unfortunately, there are dangers in narrow concerns where specific group biases limit the social effectiveness of professional groups.

Occupations undergoing professionalization are often dependent on more highly professionalized occupations and therefore tend to be on the defensive. With certain less professionalized occupations where there is an aspiration toward more highly professionalized status, the

1 Ibid.

occupations may engage in effect in a struggle for survival. In this process practitioners may expect at best, to be avoided by related occupations unwilling to recognize their existence, because members of other occupations may feel that the newer work activities impinge on established occupations, or that the calibre of services provided by the new occupations is "not up to standards."¹

During the process of professionalization the final process, often after great conflict, is the establishment of effective working relations with members of related professional groups, according to Caplow.²

We can predict, therefore, that interprofessional collaboration may be achieved only when each respective professional is safe and secure in his own professional role. However, if his professional socialization can occur in an atypical manner, collaboration may be a less threatening achievement. It is to this goal that efforts for interprofessional education are made.

**Interprofessional Collaboration**

The concept of collaboration relates to utilization of problem solving techniques as individuals work together for common goals. When members of several practicing professions seek to define goals of mutual concerns and to develop mutually satisfying working relations in implementing those goals, interprofessional collaboration occurs.³

Aradine and Pridham indicate that interprofessional collaboration

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¹ Vollmer and Mills, eds., Professionalization, p. 243.
² Theodore Caplow, Sociology of Work (Minneapolis: University of Minnesota Press, 1954), p. 34.
³ Vollmer and Mills, eds., Professionalization, p. 23.
Implies a process of working together with shared goals and philosophy, with understanding of the professional and individual skills, knowledge, and characteristics of one's self, and one's partner. It requires the willingness and maturity to share, to adapt, to listen, to communicate directly and openly about one's feelings, thoughts and differences, and to be sensitive and responsive to one another's expectations.¹

Shein² states that the basic criticism against the professions is that they have been unable to develop connections to other professions and have failed to train practitioners in the skill of working collaboratively with other practitioners.

The professions have not been able to look at problems holistically, have not used a total "systems" concept, have not identified the interconnections between the areas they are traditionally responsible for, not striven to reduce the conceptual boundaries that exist between their underlying disciplines.³

Shein further states that

The traditional model of professional education puts so much stress on the professional as an autonomous expert whom the client can trust because of his high degree of skill and commitment to a profession that we may well have trained out of most of our professionals the attitudes and skills that are needed to work in collaboration with others.⁴

Mayhew suggests that professional schools must reduce the emphasis upon research and increase the emphasis upon the concerns of the practi-

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²Shein, Professional Education, p. 34.
³Ibid., p. 36.
⁴Ibid.
tioners as they attempt to meet the needs of the communities they serve.¹

In a model for effective organization five components were identified by Katz and Kahn:²

1. Process specialization of tasks.
2. Standardization of role performance.
3. Unity of command centralization of decision making.
4. Uniformity of practices.
5. No duplication of function.

This model of organization is detrimental when considering a health care team or an interprofessional student team and apparently forecasts the multiple problems such teams have today. Among health professions there is much overlap of function and role performances cannot always be standardized. Each individual professional provides his own input based not only on his professional education but upon his personality characteristics. Clients and other professionals may or may not receive or accept the input in standardized ways. If human organizations are defined as role systems and the psychological bases of organizational functions is approaches in terms of motivation to fulfill organizational roles and goals, application to interprofessional collaboration is more viable.

In the United States health disciplines and their educational systems still function as largely uniprofessional controlled systems with a stratified hierarchical arrangement. Several professional groups are


expected to function in a subordinate way to the superordinate professor of medicine. Others are in a subordinate role to him in rank status, prestige, power and control.¹

Unfortunately, although their future jobs are by the team description "interrelated" the various categories of medicine and paramedical students are usually isolated from one another. Isolation during the period of training implicitly teaches some of the behavior that goes with the hierarchical castelike structure of the medical work system according to Barrie Thorns,² writing in "Education for the Professions." Those at any particular level of the medical hierarchy resist being taught in the same room as any lower category and separate uniforms, curricula and schedules mark off the various strata of students in a "cloistering phenomenon." Medical students rarely have academic contact with nursing or inhalation therapy or social work students. Their classes, faculty and routines are separate even when the programs are administered within the same medical center or university. The only noticeable movement toward integrated training programs has been with some Schools of Allied Health professions where similarly ranked occupations occasionally share required courses, e.g.: nursing, physical therapy, occupational therapy students take pathology and microbiology together.

At the clinical level the experiences of each student group tend to be walled off and isolated. Medical students follow one set of rounds

¹Leininger, "This I Believe...About Interdisciplinary Health Education for the Future," pp. 787-791.

and rotations and nursing students have their own separate structured experiences with contact between the two only by chance occurrence. A degree of isolation and condescension toward occupations lower on the hierarchy seems to be a basic part of the professional attitude.¹

Ross and Schour described an interdisciplinary program in an article in the American Journal of Orthopsychiatry.

... there are certain conditions which must prevail in order that interdisciplinary education be effective. It is essential that each discipline have some knowledge and understanding of the training and function of the others, that each respect the other and have a readiness to learn from the other. Not only must each discipline know its own functions and limitations but it must be ready to see these in relation to that of the others.²

In a study comparing attitudes of Health Care professionals regarding collaboration, Helen Rehr³ identified limited sharing of knowledge and values among social workers, physicians, and nurses. She stressed that differences could be discussed and hopefully understood if patterns of interaction for collaboration were programmed early in the educational process.

Knowledge must be shared of the value commitments which mutually bind and appropriately separate the professions. Without a common language and without such knowledge sound interprofessional collaboration is difficult to achieve.⁴

¹Ibid., p. 79.


⁴Ibid, p. 62.
Zander, Cohen and Stotland\textsuperscript{1} also maintain that trust and understanding among those who work together is necessary to true cooperation. They believe that in theory cooperation among professional persons should be easy because the standards of professional bodies require service to others and purposes can be shared, however, the members of the various professions being their own points of view, social positions and skills to the collaborative relationship and these differences may interfere with development of confidence and mutual agreement.

Zander and others\textsuperscript{2} further mention that each profession has certain expectations among its members concerning their own behavior and the behavior of those in other professions but the attitudes are not always acceptable to everyone concerned.

According to Vollmer and Mills\textsuperscript{3} when an occupation's function is unique and it supplements or compliments the work activities of other occupations, problems of interoccupational relationship may be minimal. When there is duplication or some degree of overlap among occupations, problems often arise.

George Straus\textsuperscript{4} in an article in "Industrial Relations" identified what he believes to be the major factor interfering with interprofessional collaboration. "Professionalism" complicates the task of developing teamwork between occupations, according to Straus. Each profes-

\begin{itemize}
\item \textsuperscript{1}Alvin F. Zander, Arthur R. Cohen, and Ezra Stotland, Role Relations in Mental Health Professions (Ann Arbor, Mich.: University of Michigan Press, 1972), p. 17.
\item \textsuperscript{2}Ibid.
\item \textsuperscript{3}Vollmer and Mills, eds., Professionalization,
\item \textsuperscript{4}George Straus, "Professionalism and Occupational Associations," Industrial Relations, II (May, 1963), 31.
\end{itemize}
sion tends to develop a parochial, specialized point of view. As a result, jurisdictional disputes become more common and the overall organization starts to break down into a number of semi-autonomous departments.

Reed\(^1\) provides evidence of how the high level of professionalism existing today within the health care team establishes a game that is played. The various professional groups establish rigid membership rules. No professional discipline is spared; nurses are upset with the physicians assistant, in medicine the specialists exclude the family practitioner, and on and on. This kind of professional overprotection is a serious deterrent to the establishment of an efficient system for providing quality health care.

Cottrell and Sheldon\(^2\) classified problems of interprofessional collaboration in a study of collaboration between social scientists and practicing professionals. They indicated three major factors which interfere with effective teamwork.

1. **Cultural Differences.** All subgroups of the society tend to develop their own ways of perceiving and conceptualizing the "facts" of their world, their own particular goals and scales of values, their own language meaningful to them but jargon to the outside, and own body of technology with which they operate on the objects of their special concerns.

2. **Social Structure and Status.** The nature of the setting in

\(^1\)D. Cramer Reed, "Integrated Teaching for Medicine and Allied Health," *Journal of Allied Health*, II (Fall, 1973), 159.

which the occupation works and from the position and status it occupies in that setting. A rather rigid bureaucratic, authoritarian, status conscious institutional situation is not an easy setting for a representative of a new relatively unknown and low-status professional to test and demonstrate the relevance and utility of his discipline. Experimental projects rarely find their home in this type of atmosphere.

3. Role Ambiguity and Incongruent Expectations. When there is lack of clarity in role expectancy and incongruity of conceptions of self and expectations of others during interprofessional interaction, problems occur. Even when roles and interests are spelled out in considerable detail early in the project, a fairly prolonged period of mutual effort is necessary before effective congruent perceptions and expectations are developed.

Leininger believes that as interdisciplinary team members work together in a shared participatory manner they gradually become more group conscious and less unidisciplinary centered for they learn ways to coordinate their skills and those of other disciplines. However, Berger et al emphasize that a climate for collaboration takes a great deal of effort to be established. In a case study in collaboration they provided individuals (in this case, nurses), with elevated status and support so they would want to assume new responsibility and feel confident. They emphasize that professionals work best when they are valued and trusted by their peers and, of course, other professionals. "There is no 'best' way for professional groups to work together . . . but rather one to be

1Leininger, "This I Believe...About Interdisciplinary Health Education for the Future," p. 789.

discovered as they work together in practice.\textsuperscript{1} Leininger also stresses that status differences, power controls, distorted role expectation and other views can seriously influence interdisciplinary goal efforts. "The principles of group dynamics and democratic involvement are most important in developing and supporting an interdisciplinary milieu.\textsuperscript{2}

Cottrell and Sheldon\textsuperscript{3} outline steps which are useful in overcoming obstacles to collaboration:

1. Developing optimal initial orientation and level of expectation.

2. Maximizing mutual assimilation of professional and subcultural values, ideologies, technologies and language.

3. Clarification of the roles of each participant.

4. Increasing the interpersonal skills of the participants.

Jacobson,\textsuperscript{4} when describing "A Study of Interprofessional Collaboration" identified eight phases in the interprofessional groups movement toward their goal of developing a community program in preventive mental health. It was interesting to note that over the year the attitudes and behaviors of group members changed significantly as well as the leadership from the most likely one—the psychiatrist to the least likely—the newspaperman.

\textsuperscript{1}Ibid, p. 716.

\textsuperscript{2}Leininger, "This I Believe...About Interdisciplinary Health Education for the Future," p. 788.

\textsuperscript{3}Cottrell and Sheldon, "Interprofessional Collaboration," p. 236.

The phases were:

1. **Early Enthusiasm.** When group members recognized the need to understand one another's educational preparation and roles.

2. **Warming Up.** Open, mutual respect with sharing of knowledge of background and education. All around rigidity and defensive antagonism developed.

3. **Insecurity.** Uncertainty, uneasiness and tension developed with individual group members defending their own professions and its normal values, traditions and customs.

4. **Tug of War.** A period when members wanted to work along and feel negative about team approach.

5. **Negatives Emerge.** Members expressed fears of loss of professional identity and status. They appeared "caught between group and peer standards."

6. **Hostility.** Open recognition of negative attitudes toward others. Members could not work together. Open acknowledgment of inability to share mutual value systems.

7. **Reaffirmation.** Efforts to come to terms—challenged by the good and sense of purpose. Wanted to relate to others.

8. **Identification with Others.** "Only when hindrances had been brought out and dealt with could fusion occur and each member begin to glimpse the possibility of achieving the quality of delighting in another man's work and linking his own to it."

Six problem solving behaviors identified by Aradine and Pridham\(^1\) as essential for interprofessional collaboration include: 1) direction setting, 2) assessing, 3) planning, 4) gathering, 5) applying, and 6) eval-

Leininger stresses that

Interdisciplinary socialization practices can reduce interprofessional competition and foster complimentary role health behavior... that interprofessional competition and hostility will increase unless there are opportunities for students, faculty and service personnel to study and work together toward a common goal of providing adequate health care to people... Students and faculty should have the opportunity to study and work together with faculty and students of different disciplines before they are employed in a health agency and before leaving an educational health institution.  

Description of Interprofessional Learning Opportunities

Madeline Leininger emphasizes that

Interdisciplinary health education is truly a goal yet to be achieved; it offers much promise to improve ultimately our health care delivery system. Undoubtedly, problems and pitfalls can be expected in our endeavors to develop and perfect effective interdisciplinary health programs.  

A few examples of planned interprofessional educational programs have been described in the literature. Most are concerned with educational methods and strategies which aim to minimize fragmentation and compartmentalization, both of the scientific investigation and the approach to human problems. Emphasis is placed upon development of the "Health Team Method." Szasz defines this method as one based on the needs and interests of clients with specific goal selection and with

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1Leininger, "This I Believe...About Interdisciplinary Health Education for the Future," p. 791.
2Ibid.
3George Szasz, "Interprofessional Education in the Health Sciences," Milbank Memorial Fund Quarterly, XLVII (September, 1969), 449.
fusion of preventive, diagnostic, therapeutic, and rehabilitative function. It includes deliberate combination of, extinction of, or extension of traditional roles and possibly invention of new roles. The interrelationship of physical, emotional, and social components of health and illness is viewed as a principle basic to this method.

The following programs describe efforts toward building of the health team concept. They are based upon objectives such as: learning each others roles, improving communication, appreciating each others professional contributions, and joint problem solving for clients in actual health care delivery settings.

Hester Y. Kenneth, in an article in *Nursing Outlook*, described the establishment in 1966 of an interdepartmental division oriented toward ambulatory care within the department of medicine at the University of California, San Francisco Medical Center. One major purpose was to provide interdisciplinary clinical learning experiences for health science students with involvement of faculty from each of the University's health science professional schools—medicine, nursing, pharmacy, and dentistry.

Selected senior baccalaureate nursing students (fifth year) were assigned to work with senior medical students in the care of ambulatory patients and their families.

Students discovered the behavioral consequences resulting from the different methods of education and professional socialization for their particular health professions. Each group of students was exposed in some depth to the professional perspective of the other.

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Faculty and student evaluation of the early development of the program identified two main problems. They believed that for the most part traditional clinical settings (ambulatory clinic) were not appropriate for team method education, for their policies and procedures interfered with the development of collaborative work relationships. Another problem was that faculty from medicine and nursing had not had sufficient time and opportunity to develop together joint learning objectives and teaching methods before the students arrived.

The faculty also expressed the need to attempt to provide additional joint learning experiences earlier in the curriculum appropriate to each level of the professional nursing program.

As a result of recommendations made by Kenneth and others involved in the program, a five year grant for "The Improvement of the Teaching of Nursing in the Interdisciplinary Care of Ambulatory Patients" was awarded by the Division of Nursing, Public Health Service U.S. Department of Health, Education and Welfare.

In response to the first problem identified by the faculty and students in the initial projects, a primary care clinic was developed to be used as the comprehensive learning site and to meet the community's expressed need for a source of primary health care. In 1973, Rosenauer and Fuller, nurse educators, described their experiences with this new funded project. The problem of developing "joint planning" created conflicts which the faculty found difficult to alleviate.

What was certain was that to accomplish "joint planning" both medical and nursing students needed to change behavior that had been a

1Janet Rosenauer and Dorothy Fuller, "Teaching Strategies for Interdisciplinary Education," Nursing Outlook, XXI (March, 1973), 159-162.
basic component of their own professional socialization process. The medical student had to learn to share the responsibility for determining patient care needs and the nursing student had to accept responsibility for planning patient care rather than exclusively following physicians directions. Final evaluation of the project was not reported, however, positive effects on both groups of students were apparent.

The authors stated that by providing joint clinical experiences during these students "professional" socialization process, the goals of improved delivery of primary health care facilitated through interprofessional teams could become a reality.

They make a special point of stressing, however, that before medical and nursing students can learn to work collaboratively with each other, faculty from each discipline must learn to work together.

Jones and Dunn describe a similar pilot project jointly planned by the nursing faculty and the Department of Family and Community Medicine, University of Toronto. Fourth year nursing and medical students practiced jointly as the basic health team with other health professionals as necessary. Patient care conferences were facilitated to collect assessment data, arrive at mutual care goals, involve other health personnel as appropriate, and to evaluate care and progress. Nurses shared in weekly seminars arranged for medical students.

At the end of one year, findings were based on evaluation of achievement of the general educational objectives and those of the project which focused on role modeling and collaboration among team members. The authors stated that the project was successful to a degree but "achieve-

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ment of the objectives was limited by the infrequent contact between nursing and medical students." The students claimed they did not really see professional team functioning and therefore could not observe it as a model team (although staff members did believe the team functioned). Most staff members expressed belief that projects in such settings could provide improved education and recommendations were made that the project be continued. No final report was available.

At the University of Miami, another similar demonstration project was conducted whereby students of nursing, medicine, and social work worked as a health care team. The objectives of the project\(^1, 2\) included developing a program designed to instill and maintain the attitudes and behaviors necessary for effective interdisciplinary team work:

- To increase the understanding of each group of the educational preparation, orientations, and intervention modes of the three professions;
- To develop more fully the individual students understanding of comprehensive health care;
- To demonstrate the part of student collaboration in the delivery of effective care to the family.\(^3\)

The setting for the project was a model family practice unit which was established by the Department of Family Medicine in 1965.

Both objective and subjective measurements were used in evaluating the program. All groups were tested before and after the experiences by means of the Medical Attitudes Scale, Rokeach Dogmatism Scale, and on ten concepts using Osgood's Semantic Differential.

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\(^1\) Libby A. Tanner, An Interdisciplinary Educational Project in Comprehensive Family Health Care, Florida: Miami University School of Medicine, ERIC Document ED 062 559, February, 1972.

\(^2\) Libby A. Tanner and Ethel J. Soulary, "Interprofessional Student Health Teams," *Nursing Outlook*, XX (February, 1972), 111.

\(^3\) Ibid.
For one year, ten teams of students provided comprehensive health care to one family each. The emphasis was on total health care through a health care plan with observation and evaluation supervised by preceptors using closed circuit TV, one way mirrors, and regular team conferences and seminars.

Significant statistical differences were not found between the experimental groups (students who volunteered and were assigned to a interdisciplinary team) and the control group (who volunteered but were not assigned to a interdisciplinary team).

However, differences were found between the "volunteer" groups taken as a whole and the comparison group (those who had not volunteered for the project at all). The differences found were in a positive direction for those who volunteered, indicating perhaps that the characteristics of students who choose an elective in comprehensive health care at the beginning of their professional education are different from those who do not.

Subjective data, evaluation from students, preceptors, and families indicated project success. The care given was rated highly as truly comprehensive in nature.

Tanner and Soulary specifically stated that the students who participated in this project might have benefited by increased role sophistication before being exposed to the stress of team interaction. The study pointed to the need for more opportunity for student teams to work together early in their professional education and had implications for curricular modification in health profession schools. Unfortunately, when the funding period was over, the project was not sustained.

Another example of an interdisciplinary teaching effort based on the need to educate for team delivery, is a description of "Kentucky
January." Tom Connelly, Jr. described a clinical field program based upon an academic model in the community organization, developed for the University of Kentucky allied health care students so they could see a "real world demonstration of teaching models in action." The field program was later opened to students in health related programs throughout the University, Evaluation efforts resulted in several recommendations for improvement especially preparation of faculty.

Donald Madison also described a short term interprofessional learning activity similar somewhat to Kentucky January but involving an inner city area desperately in need of health care. The objective also was education in community medicine and focused on a depressed community and its system of health service. It is uncertain whether the program was sustained.

In the New York City project conducted during the summer, pre-clinical students were given the opportunity to see the system from the clients view by serving as "patient advocates."

The project sponsored by the Office of Economic Opportunity included all health professions, students on a voluntary basis in an attempt to have these students share the same concerns with social issues, public health and the human responsibilities that health professionals should assume. The project evaluation was unclear at the time of this report.

Some schools have approached the mandate for interprofessional

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3 Ibid.
collaboration in a more comprehensive manner. At the University of the Pacific, Stockton, California, a new school of health professions was established. Under the sponsorship of the Health Resources Administration, Department of Health, Education and Welfare, Public Health Service, the School of Health Profession focuses on primary health care, interprofessional education and care-delivery, and self-paced curricula. Six types of health professions comprise the initial student body: primary care physicians, primary-care dentists, nurse practitioners, clinical pharmacists, graduate social workers, and health care coordinators. The University of the Pacific's program prepares students to deliver the specific kinds of primary-care services required in professional practice. The program is still in developmental stages and the final report for the funding agency is descriptive but not evaluative of the overall project and its effectiveness in meeting its objectives.¹

The Mount Sinai School of Medicine in New York City, a relatively new school in the country, accepted its first class in 1968 with a curriculum which provides for conjoint learning with members of allied health and health related professions. Early in their education, medical students are assigned to multiprofessional task forces composed of students and faculty of Social Welfare, Nursing, and Allied Health Professions. Bess Dana stressed that these experiences are initiated when the students know enough about the role requirements for their own professions to have a sense of professional identity and that these experiences

¹Health Resources Administration (DHEW/PHS), A New School of Health Professions, University of the Pacific, Stockton, California, School of Medical Sciences, Bethesda, Maryland, ED 17369, CE 006001, January, 1975.
help the students from different health professions "to act together not necessarily to think alike."\(^1\)

Szasz, in an article in the *Milbank Memorial Fund Quarterly* entitled, "Interprofessional Education in the Health Sciences," discussed a major interprofessional effort of the Health Sciences Center at the University of British Columbia.\(^2\) The basic philosophy underlying these efforts was that "if health professionals are to work together they must also learn together." An interprofessional committee aimed to provide the "best" educational opportunity for many health professionals and to break down the barriers between them and encourage function as an integrated group. This group identified barriers not only between professions but within professions as well. Examples cited were practical nursing and professional nursing, psychiatry and surgery.

Differences between professions which impeded communication included differences in goals, training and techniques. The lack of definitive areas of responsibility related to rapid pace of technological development and consumer demands was described in terms of territorial conflicts between clinical psychologists, psychiatrists, psychiatric social workers and psychiatric nurses.

Szasz makes a specific point that the tradition of education in western society stresses competition and therefore collaboration is difficult.

The committee recommended that in order for the students to go

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\(^2\)George Szasz, "Interprofessional Education in the Health Sciences," *Milbank Memorial Fund Quarterly*, XLVII (September, 1960), 450.
through a process of "interprofessionalization" and enlarge their limited professional outlook, changes in administrative, economic, social and educational factors would have to occur. Of utmost importance was a need for full active participation of faculty and students.

In 1968-1969, almost six hundred of one thousand students of eight health schools at the University of British Columbia participated in at least one interprofessional educational experience. A variety of strategies were offered, some purely didactic and others involving clinical activities such as, family visits.

Evaluation, although difficult even for short term objectives, tentatively concluded that:

1. Students are receptive to learning experiences that indicate positive relationships in the context of future professional roles.

2. Students of one profession react positively to students of other professions if they receive explanation of need to have common learning experiences.

3. Students feel their learning experiences are being "diluted."

4. Students of mixed classes without especially arranged opportunity for interaction do not, as a rule, discuss their educational experiences and don't even talk to each other.

5. Students in mixed classes need opportunities to clarify for themselves the applicability of common subject matter to their own professional orientation.

6. Films and videotapes can be effective to deliver same information for all groups without interfering with time tables and without added demand on staff.

7. Utilization of problem solving methods in learning experiences appear to be the most promising means for developing collaborative relations but must be supported by tutorials.
8. The effectiveness of out of school programs okay if students have the freedom to exercise their creativity.

9. Emotion promoting audiovisual techniques are good to establish communication of attitudes.

10. Mixed group discussion needs trained group leaders.

11. Timetable problems interfere so that early planning and organization is necessary.

12. Physical separation of schools causes difficulty in organizing learning experiences.

13. Some work loads of faculty and students makes participation impossible.

14. Fourth year students of medicine are less interested than last year students of other professions--perhaps because they are more secure in established future roles and feel less need for cooperation than others. First and second year students of medicine appear interested.

As a result of the evaluation and with support of faculty a Council of Interprofessional Health Education Students was formed following a school sponsored retreat. Although first involved in primarily social functions, the group then expanded its functions to include educational activities. They recommended the construction of learning areas with adequate common rooms for coffee periods and informal discussions among others.

A variety of other interoccupational educational programs have been attempted across the country. Although not always exclusively at the "professional" level, core courses such as "Fundamentals of Health Care" have been offered for students of varying health occupations at several schools. In one California community college, this type of course was offered to nursing and medical assisting students.

A study to evaluate the effectiveness of such a course was con-
ducted. The findings indicated that

It appears feasible to suggest that students with widely divergent entering skills and different though related occupational goals can successfully achieve acceptable levels of academic performance in both a core course and subsequent work in their respective majors. Multisensory self-pacing teaching strategies designed to minimize the impact of differences and promote activity, and individualized learning enhanced the effectiveness of the program. The attrition rates for both groups were lower than average for the previous three years.¹

Some programs of core learning specifically identify the contributions of nurse faculty. Nurse faculty have also recognized that their special expertise can enhance the educational programs for students of fields outside nursing.

Dorothy Major² describes efforts of the School of Nursing of the State University of New York at Albany which provides courses for non-nurse majors. School of Nursing faculty have been teaching human sexuality, drugs, nutrition and legal implications of health service. The course in human sexuality, begun in 1973, was "actively spearheaded through a multidisciplinary campus committee of 12 to 14 persons by the nurse who teaches it." This has been a truly interdisciplinary course developed by the planning committee and selected by students with a variety of majors. Although the course outline was developed by the Maternal Child Health nurse faculty member who is the lead teacher, instructors from Anthropology, English, Classics Counseling, Guidance and Social Welfare, as well as psychiatry participated.

Students represented the fields of English, social welfare, educa-


²Dorothy Major, "Nursing School Courses for Non-Nurses," Nursing Outlook, XXII (December, 1974), 769.
tion, rehabilitation counseling, psychological counseling, and student personnel guidance, both undergraduate and graduate.

The faculty believed they have provided an enlightened attitude toward health to many young people other than nursing through experiences such as these. "Although nurse faculty do not teach all the courses, student do identify with the school of nursing and view the courses as something which nursing has made possible for them."¹

Students themselves have expressed the need for more interprofessional learning opportunities. Mark Rockoff,² a third year medical student found his education limited by its isolation. He particularly identified the need for shared teaching responsibilities, indicating that his future role as a teacher would be greatly enhanced if he had the opportunity to begin as a student, to learn together with others. He recognized that there was much benefit to be gained when other professionals taught him some of their exclusive professional and technical skills when he needed.

At an annual student association conference held at the University of Toronto early in 1974, several hundred baccalaureate nursing students discussed the theme, "Interdisciplinary Health Education," and recommendations were made for educational activities which could foster effective collaboration.³

¹Mark Rockoff, "Interactions between Medical Students and Nursing Personnel," Journal of Medical Education, XLVIII (August, 1973), 730.
³Ibid.
Mary Sue Infante and others at the University of Connecticut described in the *Journal of Allied Health* a didactic interdisciplinary course offered by the Schools of Allied Health, Nursing, Pharmacy and Social Work. The course concentrated on the theory of interprofessional behaviors necessary for "teaming," and included an experimental component to stimulate a team problem solving situation. The underlying philosophy of the course was that learning together is essential to working together. Evaluations by students were supportive, however, faculty evaluation dealt with the conflicting values of degree of commitment to interdisciplinary course, perceived threats upon individual autonomy and philosophical differences concerning directions for interdisciplinary learning experiences for the health professions.

Again the conclusion was drawn that if students are to learn to practice together, faculty must be prepared to work together "Without some visible evidence of team practice by faculty members, the educational enterprise will lack authenticity." Despite the problems identified the potential for interdisciplinary teaching and learning was endorsed and supported.

The need for more experimentation and evaluation remain as a critical one if interprofessional programs truly are to become part of the basic education for baccalaureate nursing students.

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2Ibid.
Summary

This chapter has presented a brief review of selected literature pertinent to the study of interprofessional collaboration. It has explored the definitions and concepts of profession, professionalism, professionalization and interprofessional collaboration, as well as descriptions of courses or programs which include interprofessional learning. Some major themes identified were the criteria for professionalism especially "autonomy" as an interference with interprofessional collaboration and the need for faculty to learn to work together so they can serve as role models if students are to learn to work together on future health care teams.
CHAPTER III
THE RESEARCH STUDY

This chapter will describe the procedures employed during the research study: the preliminary exploratory survey, selection of research sample, methods for data collection including instruments as well as statistical methods used for analysis of data.

Preliminary Exploratory Study

A preliminary exploratory questionnaire was mailed to the Deans or Chairpersons of 246 National League for Nursing accredited baccalaureate nursing programs (Appendix A and B).

This survey sought to identify nursing programs which currently include interprofessional learning experiences in their curricula, which have included such opportunities in the past, as well as those which are in the process of planning for interprofessional learning in the future.

This preliminary questionnaire asked for the title of courses offered, whether the course involved classroom and/or clinical work, whether it was required or elective, and the titles of the other health professions students involved. In addition, information related to nursing faculty involvement was sought.

A question was included which could elicit information regarding plans and proposals for future development of interprofessional learning activities.

In view of the paucity of published evaluation of such programs offered in the past this information was requested particularly in relation to courses or programs which had been attempted but were no longer
A request for participation in an indepth research study was included. Schools were also asked to provide some information relating to the nature of their enrollment, and curriculum.

One hundred and fifty-five schools of the 246 NLN accredited programs responded to the questionnaire. Of the schools which responded 57 (37%) stated that they had programs of an interprofessional nature, while 92 (62%) indicated that they did not currently have such programs.

Of those Deans or Directors responding to this questionnaire eighty-two (52%) mentioned that they were planning opportunities for new interprofessional learning in the near future. Fifteen (19%) were uncertain. This included responses from schools with and without current programs. Thirty-five of the ninety-six schools without current programs were considering such plans but had nothing specific or concrete to announce at this time.

Respondents identified a wide variety of current course offerings required of nursing students, or open for optional election. This researcher attempted to group titles in an effort to consolidate information gathering and reporting. In some cases, overlapping within categories was apparent. In addition, titles alone without course outlines which include objectives and content information made it difficult to describe and categorize such courses as "Health Science" and "Health Care."

Some respondents included in the title "Nursing" with indication that students of other professions were permitted to elect the course, or were involved in the planned clinical practicum.

The full list of courses offered appears in Appendix C. The categories identified include:
a. Social Sciences and Humanities
b. Political Sciences and Systems
c. Clinical Focus Courses
d. Research Process in Health Care
e. Natural and Applied Science for Upper Division Students of the Health Professions
f. General Health Topics and Special Problems

The most commonly offered interdisciplinary course by title was "Human Sexuality." In addition, several schools submitted written descriptions of their interprofessional programs.

One of the schools in the Midwest described "A Beginning Interdisciplinary Experience in the Health Professions" with the College of Human Medicine and the College of Osteopathic Medicine. The purpose of the pilot study, with less than 20 Nursing and 20 Schools of Medicine students, in two separate programs, was to "facilitate relationships which will promote a collaborative and cooperative approach toward patient care."

Another school in the West described the development of a "Health Sciences Curriculum" with a core curriculum developed for a variety of pre-health profession students and anticipation of further development through a Division of Health Science.

A New England School described a core curriculum for Students of Nursing, Health Services Administration, Gerontology, Medical Technology, and Health Education with nursing educators involved in developing and teaching students of the various programs.

Two Southern schools described funded programs where Nursing Students and Physician Associate Students in one case and with Medical Students and Social Work Students in the second. In both cases once founda-
tion support was completed, the programs were terminated.

These were quite varied and included students of health professional schools at the graduate level such as Medical, Dentistry, and Clinical Psychology as well as those at the undergraduate level such as Pharmacy, Physical Therapy, Social Work, and Physicians Associate. Some students were not in traditional health professions, but were in graduate programs such as law and theology or undergraduate such as special education.

Respondents also indicated the student population other than nursing for these courses. It was apparent from this list that nursing students in baccalaureate programs across the country were having learning experiences with students of other professional groups.* (Appendix C)

The diversity in student academic and professional background probably reflected the great diversity within American educational institutions.

Nursing faculty involvement in interprofessional teaching was indicated at approximately 32 percent. In approximately half of the cases this represented the nursing faculty participating in an interprofessional teaching team, while in the other cases it represented a nursing educator alone or with other nursing educators, offering a course which was either required or open for election by students of other health professions. The names and titles of faculty with course responsibilities were identified by the respondents.

Although very little evaluative information was requested in this preliminary survey, 21 (13%) respondents indicated that they did have

*For this study professional groups are identified as occupations which require at least a baccalaureate degree, are concerned with major human problems and which are based upon scientific and humanistic foundations.
interprofessional programs of some nature during the past 5 years which had been discontinued. The most frequent reason indicated for discontinuation of the course or program was loss of outside fundings, although some respondents mentioned lack of student interest, difficulties in scheduling, and problems with philosophy and objectives. Most respondents gave no one reason for discontinuation.

This researcher sensed a highly positive response to the preliminary questionnaire. Several respondents made mention that the topic was especially timely, interesting, and the research necessary. Although all participants were offered information gathered by the researcher at the end of the project, many specifically requested copies of the findings.

The response to the question regarding further participation in the study was considered interesting and helped somewhat to direct the proposed project to a certain degree.

Respondents from fifty-two schools (33%) indicated they would be willing to participate. Twenty-six of these represented schools with programs of interprofessional learning and twenty-six represented schools without such opportunities.

Several respondents who refused to participate or provided "no response" or an "uncertain," mentioned that there were many problems associated with development and implementation of interprofessional programs. One respondent specifically mentioned that planning with the medical school was particularly difficult. Some said the efforts were too new and there was insufficient data available, while others left the decision up to individual faculty.

Although the original purpose of the research was to explore and describe interprofessional learning opportunities, a more specific
component established itself as a result of the preliminary survey: factors which appeared to promote or inhibit development and implementation of such opportunities. It was certainly apparent that the great diversity in higher education programs across our country was affecting strategically the types of learning opportunities provided for baccalaureate nursing students.

In response to the results of the preliminary survey and in consultation with committee members, a decision was made to expand the original purposes of the study to include an exploration of factors promoting and inhibiting interprofessional learning.

Selection of Research Sample

In view of the new direction for the research stimulated by the response to the preliminary survey and the offer of participation from twenty-six schools without current interprofessional learning opportunities as well as twenty-six with programs, a decision was made to accept the total voluntary group of fifty-two schools for the sample to study.

Once the questionnaire was developed it was mailed in total or in part as appropriate to the Dean or Director of each of the volunteering fifty-two schools as well as to several schools which were indecisive. Selected parts were sent directly to nurse educators identified by their dean or director as currently involved in interprofessional teaching. (Deans or Directors were asked to respond themselves.) In addition the deans or directors in schools with interprofessional programs were asked to randomly select at least three faculty involved and three faculty not involved in interprofessional teaching. In the schools where no interprofessional learning was occurring, deans or directors
were asked to randomly distribute at least three questionnaires to faculty. At least five copies of the questionnaire were sent to each Dean or Director.

Once the return mails ceased, after two written follow-up requests and several telephone requests as necessary, a sample of responses from nurse educators across the country was established. It became apparent that although some schools had originally indicated willingness to participate in the in-depth study they no longer cared to, or the individual faculty had decided not to participate.

Two hundred and one responses to the questionnaire relating to factors which promote and factors which inhibit interprofessional learning were received from nurse educators. One hundred and twenty were from individuals in schools with current interprofessional learning, although not all of these educators were actually involved in such activities. Eighty-one responses were received from individuals in schools without interprofessional learning activities.

These two hundred and one responses, however, did not come from fifty-two schools, but had come from forty-six schools. There was no faculty response from six of the original volunteering schools without interprofessional learning, although in four cases the questionnaire related to school information was received. In addition no response was received from two of the original volunteering schools with interprofessional learning. Since several schools which were indecisive about participating were mailed packages of questionnaires also, and response was received from two of these schools, the total number of participating schools with interprofessional learning remained at twenty-six.

It is also important to note that the number of individual responses
received varies from school to school. In some cases only one nurse educator from a particular school actually returned the questionnaire, while in one case eleven responses were received.

Methods of Data Collection: Instrument

A multicomponent questionnaire was developed to collect data by mail from Deans or Chairpersons as well as from faculty of the participating schools (Appendix F).

The major purpose was to learn the perceptions of nurse educators regarding factors which promote and inhibit interprofessional learning. Another major objective was to gather descriptive data relating to programs for baccalaureate nursing students which include professional learning activities.

The literature review indicated that multiple factors both internal and external to institutions influence philosophy, policies, programs and perceptions of faculty within. Therefore, it was necessary to collect information relating to the institutions represented by the respondents, information about the respondents themselves, and information describing the programs the respondents are involved in.

Part A. General school information. In order to identify characteristics of participating schools this part of the questionnaire sought information regarding location, administrative support, organization, enrollment, admission requirements, type, length, numbers of faculty, organizational structure and leadership, sites for clinical learning experiences as well as other Health Professions curricula under the same administration.

It was recognized and supported by the literature that any or all of these factors could influence whether or not interprofessional learn-
ing was developed.

Most of the published descriptions and evaluations of interprofessional programs have been developed in the larger schools. Although many are in public institutions others have been in private institutions. Most of these have been supported through special grants from governmental or private agencies. The Deans or Chairpersons were requested to complete this part of the questionnaire.

Part B. Programs of interprofessional learning. While the exploratory survey gathered general information, this part of the questionnaire was developed in order to identify specific characteristics of the Programs of Interprofessional Learning.

Participants were asked to identify and describe courses or programs which met the definition of interprofessional learning. This meant relating to problem solving situations of interest to potential practitioners of all involved professions.

Courses in the basic natural and social sciences and humanities of a more general or theoretical nature were to be excluded.

A wide variation in program offerings and in level of student involvement could be anticipated since the preliminary survey had indicated that a wide variety of interprofessional or interdisciplinary courses were being offered in a diverse format to students of all levels in the baccalaureate program.

Information was requested regarding the nature of the program, whether part of a core curriculum, a sequence of courses or an individual or series of individual courses. The results of the exploratory survey had indicated that these routes were most common for interprofessional programs. The questionnaire attempted to clarify for each course
offered the level and number of nursing students as well as title, level
and number of other professional students. Information was requested
regarding the source of administrative responsibility, funding, facil-
ities and initiation of programs. It sought information relating to
methods of faculty selection, faculty participation, determination of
learning objectives, content, strategy and evaluation as well as
information related to duration and research associated with the specific
program. Samples were given for most of the above items. These were
identified from the descriptions of programs in the literature and from
this researchers experience with interprofessional teaching. In addi-
tion the questionnaire sought information relating to past experiences
with interprofessional learning which were no longer part of the curric-
ulum and attempted to identify major reasons for discontinuation of the
course or program. All of these components: philosophy, administration
and funding, curriculum objectives and design, faculty responsibility,
student participation, research and evaluation could be considered
essential to understanding of the program.

This part of the questionnaire was mailed only to the Deans or
Chairpersons of the twenty-six schools indicating that they offered
interprofessional learning. In some cases it was mailed directly to
the individual indicated as responsible by the Dean, or Chairperson, in
response to the initial survey.

Part C. Factors perceived as promoting and inhibiting interprofessional
learning activities. This part of the questionnaire was developed to
learn from participating Nurse Educators their perceptions of factors
which promote and which inhibit interprofessional learning opportunities.

This part of the questionnaire included three components:
1. A biographical data form to establish academic and professional practice experience of nurse educators responding, as well as general evaluative perceptions related to interprofessional teaching and learning.

2. A list of possible influencing factors categorized under headings of Administration, Faculty, Students, Curriculum, Resources and Facilities.

   Respondents were asked to indicate whether they perceived each factor to be "Primarily Promoting," "Primarily Inhibiting," "Had no Effect," or "Uncertain Effect."

3. A list of twenty-four statements relating to the same categories of Administration, Faculty, Students, Curriculum, Resource and Facilities.

   Educators were asked to respond in terms of their level of agreement or level of disagreement.

   The items listed on this questionnaire were developed by the researcher over a period of time. They reflected a synthesis of reading in areas of higher education, professional education, and nursing education as well as experience as a nurse educator in a variety of programs, where curriculum development and evaluation has always been a major responsibility of faculty.

   As a nurse educator involved with a multiprofessional team to develop and implement interprofessional courses over a two year period many of these factors have appeared influential in planning, decision making and program effectiveness.

   The statements have been collected from readings, conversations and written communications with other nurse and non-nurse professional educators, as well as nursing practitioners across the country.
Analysis of the Data

Preliminary Exploratory Study

The data from exploratory study was analyzed for frequency and percentage of responses.

Pretest of Questionnaire

In order to determine validity of the questionnaire, a pretest study was arranged. Questionnaires were mailed to all faculty of two schools, one with opportunities for interprofessional learning and one without such opportunities. Minor changes were made in the questionnaire to improve its readability and to facilitate response. No statistical analysis of data was attempted at this time.

Computer Analysis of Full Survey Data

The Computer Center at Teachers College, Columbia University was utilized to provide the following.

1. Characteristics of Participating Schools
   a. Descriptive data was summarized. Schools were then divided according to whether they currently had interprofessional learning opportunities or not.
   b. Comparison by simple frequency and percentage distribution of the characteristic of the two groups was done.

2. Characteristics of Interprofessional Learning Programs

   were summarized for 19 schools, and described by simple frequency and percentage distribution.

3. Biographical Data of Responding Nurse Educators were summarized and described.

   Two groups were established according to participation in programs with interprofessional learning.
Comparisons of group members academic background and clinical experience has been made.

4. **Perceptions of Nurse Educators of Factors Promoting and Inhibiting Interprofessional Learning**

   a. Responses of nurse educators described for the entire sample of 201 participants. Frequency distribution were identified.

   b. Respondents were divided into two (2) groups according to participation in school with or without interprofessional learning opportunities. Frequency of response to factors identified compared by Chi Square for significant difference where appropriate.

5. **Factors Influencing Establishment of Interprofessional Learning Opportunities** for baccalaureate nursing students.

   A list of eleven (11) scaled factors which might influence the establishment of interprofessional learning was determined. Statistical analysis by Multiple Regression was used to identify probable, most and least influencing factors.

This chapter has provided an overview of the research process. The preliminary exploratory survey was utilized to select the research sample and develop the data collecting instruments. The method of analysis of the data has been described.
CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter will provide a description and analysis of the research data. The various components are:

1. Description of Participating Schools
2. Description of Interprofessional Learning Opportunities for Baccalaureate Nursing Students
3. Description of Respondents
4. Identification of Factors Perceived as Promoting and Inhibiting Interprofessional Learning by Nurse Educators with Discussions of Comparisons of Perceptions
5. Identification of Selected Factors Influencing Establishment of Interprofessional Learning

The description of participating schools comprised selected characteristics of the forty-six volunteer nursing programs. Characteristics which were identified included: location, administrative support, total institutional enrollment, enrollment in the baccalaureate nursing program, maximum admission requirements, type and usual length of the program, other health professions programs under the same general overall administration, and types of clinical learning sites utilized by the nursing program.

Data relating to these characteristics from all National League for Nursing accredited schools across the country has been provided wherever possible to allow for comparisons with the schools participating in this study.

The description of interprofessional learning opportunities con-
sidered eleven major areas: nature of the program, number of individual courses offered by individual schools, classification of course offerings, level of participating students, enrollment distribution, students sharing learning activities, responsibility for administration, financing, initiation of course, selection of faculty, and development of learning objectives, content, strategy and evaluation. In addition research activities related to interprofessional activities and past experience with interprofessional learning activities were explored. An attempt was therefore made to identify courses which had been offered in the past but were no longer provided and to explore the reasons for termination.

The description of respondents included data related to past and current academic preparation, clinical experience, nature of academic responsibility and involvement in interprofessional teaching. In addition participants were asked to evaluate the effect of interprofessional teaching and learning activities upon faculty and students.

This chapter also incorporated the description of factors perceived by nurse educators as promoting and inhibiting interprofessional learning. Factors identified related to administration, curriculum development and implementation, faculty, students, and resources and facilities both on and off campus. The responses from all participants have been summarized. The responses from educators in schools with interprofessional learning and from schools without current interprofessional learning have been reported separately, and a discussion of comparisons of perceptions has been included.

Finally, in this chapter there is also included a brief report of selected factors which were identified as influential in the establishment of interprofessional learning. The three categories of factors
were academic enrollment, other health professions, and clinical learning sites.

**Description of Participating Schools**

**Location**

Using the National League for Nursing Geographic regions, schools were identified by location in one of four regions: North Atlantic, Midwest, Southern, or Western (see Table 1).

The participating schools were distributed across the country. Only two schools with programs of interprofessional learning and located in the west agreed to participate although almost 20 percent of National League for Nursing accredited baccalaureate programs were in this region.*

There was a much greater response from schools in the North Atlantic Region without interprofessional learning than from schools with these opportunities. The response from schools in the south was greater for programs with interprofessional learning than for programs without such opportunities.

One might surmise that this larger representation of programs with interprofessional learning in the south is directly related to the development of innovative health delivery systems, especially those utilizing non-physicians providers in areas with low physician-population ratios.

It might be suggested that in a volunteer group such as this no interpretations can really be made and therefore no projections to the total population can be proposed.

*No schools from this region without programs of interprofessional learning volunteered to participate in this study.
Table 1
School and Institutional Characteristics

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<th>Location</th>
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<th>A¹ %</th>
<th>B² No.</th>
<th>B² %</th>
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<th>Total %</th>
<th>NLN* %</th>
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<th>B² %</th>
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<th>Total %</th>
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<th>B² %</th>
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<th>Total %</th>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Four (4) years Integrated</td>
<td>10</td>
<td>38</td>
<td>13</td>
<td>65</td>
</tr>
<tr>
<td>Two (2) plus two (2) years</td>
<td>9</td>
<td>35</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>One (1) plus three (3) years</td>
<td>6</td>
<td>23</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Four (4) years plus</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>100</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

\(^1\)Schools with Interprofessional Learning.  \(^\text{***}\)Information not obtainable two schools.

\(^2\)Schools without Interprofessional Learning.  \(^\text{****}\)Includes all over 400 Enrollment.

\(^*\)State Approved Schools of Nursing 1976, National League for Nursing, Publication No. 19-1619, Division of Research.

\(^**\)Information not obtainable one school.
Administrative Support

Among all National League for Nursing accredited schools there is almost an equal representation of public and private schools.

A somewhat greater percentage of the schools participating in this study were publicly supported (see Table 1). Almost one-third of the sample schools were private but affiliated with religious groups of varied authority.

Schools with interprofessional learning opportunities in this research study appeared to be two times as likely to be publicly supported as those without these opportunities. Many more of the schools without interprofessional opportunities were private with religious affiliations. (One school indicated that it had both public and private support.) From this sample it might appear that "innovative" or "experimental" programs (which those with interprofessional learning may be considered), are more likely to be established in publicly supported institutions where the objective might be considered broader in scope, or funding may be more readily available.

Again, although it is not truly appropriate to project these findings to the total population of accredited baccalaureate nursing programs, it is difficult not to make such an association when so many of the projects described in the literature were in publicly supported institutions.

Total Enrollment in Institution

The baccalaureate nursing programs participating in this study represented a diverse group of educational institutions, from small liberal arts colleges to large university centers.

A small percentage of respondents, 11 percent, almost equally rep-
resenting the two groups in the study, represented institutions in which the total student enrollment included 1,000 or fewer students.

A much greater proportion of schools without interprofessional learning than those with these opportunities represented institutions incorporating total student enrollment of one to ten thousand. The largest percentage of programs offering interprofessional learning were in schools with enrollments over ten thousand, with almost a quarter in largest institutions of over 25,000 students.

Since the greatest number of interprofessional programs described in the literature appeared in rather large university centers, i.e. University of Miami, San Francisco State College, it would appear that these large institutions are more likely to have facilities for development of innovative programs. The impetus for such programs may be interest in research or commitment to social welfare. Educators in large institutions may be more pressured to participate in research programs or community benefiting social action as a means of securing advanced appointments and tenure.

Enrollment in the Baccalaureate Nursing Program

Enrollment in the baccalaureate nursing program ranged from a low of forty-eight to almost one thousand full-time students.

Although schools without programs of interprofessional learning represented very small (less than 200), to very large (1,000) enrollments, almost equally a majority of schools with interprofessional learning indicated that their nursing enrollment was between two hundred and four hundred students.

The largest percentage of all National League for Nursing accredited schools have indicated that their enrollment is between two hundred and
four hundred full-time students.

Perhaps this is the range of nursing enrollment which is not only most preferable but also lends itself to experimental or innovative endeavors. When a school is very small, with few faculty there may be less stimulus for "outside" assignments, less competition for "outside" assignments, less competition for "rank," fewer incentives for interprofessional work, and perhaps greater assigned responsibilities for those few faculty present. When a school is very large "outside" programs may become unwieldly, or autonomy may be closely guarded.

Minimum Admission Requirements

The diversity of educational programs in this country is certainly demonstrated well by the various routes for admission to professional nursing careers.

Educators have established curricula utilizing their own philosophy as well as national guidelines, and general education serves as a foundation to the study of professional nursing. Therefore, minimum admission requirements may range from high school graduation to four years of college, although the latter is rare. Most National League for Nursing accredited baccalaureate programs require only high school graduation as a minimum for admission to the nursing curriculum.1 (See Table 1.)

The majority of schools without interprofessional learning (75%) accept students with only a high school diploma. Twenty percent of these schools require two years of college, while only one school (5%) requires one year of college.

---

The picture varied greatly when looking at schools with programs of interprofessional learning. Less than one-half (42%) accepted students with no previous college study. Almost 55 percent, however, required one to two years of previous study usually with specific course requirements. (One cannot help but make a non-statistical association, therefore, between the maturity of the student and the incidence of opportunity for interprofessional learning at the baccalaureate level.)

Type and Usual Length of Program

It has already been mentioned that baccalaureate programs have an interesting diversity as indicated by minimal admission requirements. This diversity is further validated by the descriptions offered by the "usual length of program," according to information provided by participating schools, as well as that published by the National League for Nursing.1 Length may be described in terms of semester, quarters, terms, sessions, or trimesters. For example, the following is a partial list.

1. 8 semesters
2. 6 semesters
3. 4-5 semesters
4. 12-13 quarters
5. 10-11 quarters
6. 8-9 quarters
7. 6-7 quarters
8. 10-11 week sessions or terms
9. trimesters

---

1 Ibid.
In addition, summer session, January interims, and cooperative quarters have also been described as necessary for completion of the nursing curriculum.

One-half of all responding schools have a type of program described as integrated four (4) years, however only 38 percent of schools with interprofessional learning fall into this category, while 65 percent of schools without interprofessional learning described their curriculum in this way (see Table 1).

An integrated four year curriculum indicates that students are admitted at the freshman year level with an announced nursing major. Usually they begin their program with at least one nursing course along with general education courses such as English composition and biology. Sometimes no nursing courses are offered in the first semester or first year but the student has a prescribed curriculum which is considered basic to the nursing major.

More than half (58%) of the schools with interprofessional learning required between one and two years of general studies (non-nursing) before admission to the nursing major. Only 25 percent of the schools without interprofessional learning had such requirements. There appeared to be some relationship between admission requirements, type of program, and the incidence of interprofessional learning. Apparently these opportunities may exist more readily in institutions which do not admit students directly from high school. When the students are "upper division," they may be considered closer to the professional status of the other professions on the hierarchy such as: medicine, dental medicine, and clinical psychology which require a baccalaureate degree for admission to their educational programs. This proximity to the status of the "true" profession, as Etzioni describes medicine, certainly may
influence the chances for success of any interprofessional venture.

Types of Clinical Learning Sites Utilized by the Nursing Program

Much of the interprofessional learning described in the literature involved the practice by a health care team in the clinical setting. It is appropriate therefore to look at the types of clinical learning sites utilized by the nursing program to determine whether there was some relationship between the incidence of interprofessional learning and the types of clinical facilities selected.

The data identified in Table 2 represents the selection of clinical learning sites by schools participating in this survey. The most frequently used clinical learning sites for all programs were community clinics, health maintenance organizations, community hospitals, and nursing homes.

Apparently selection of clinical learning sites was based upon rather common objectives and took place quite similarly among all schools participating in this study.

A somewhat greater percentage of schools with interprofessional learning indicated that they utilized university clinics, while more programs without interprofessional learning utilized rehabilitative hospitals. Twice as many schools with interprofessional programs utilized city hospitals than those without such programs. Perhaps this occurred because a greater percentage of these programs were in public educational institutions, and were more likely therefore to be associated with public health care facilities.

The number of schools with programs of interprofessional learning using university clinics and outpatient departments may have also reflected the greater number of these programs in larger universities.
Table 2
Clinical Learning Sites Utilized by Nursing Programs

<table>
<thead>
<tr>
<th></th>
<th>A¹ (N=26)</th>
<th></th>
<th>B² (N=20)</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>University Hospital</td>
<td>11</td>
<td>42</td>
<td>6</td>
<td>30</td>
<td>17</td>
<td>37</td>
</tr>
<tr>
<td>Community Hospital</td>
<td>21</td>
<td>8</td>
<td>17</td>
<td>85</td>
<td>38</td>
<td>83</td>
</tr>
<tr>
<td>State, Federal, Veterans Hospital</td>
<td>16</td>
<td>62</td>
<td>12</td>
<td>60</td>
<td>28</td>
<td>61</td>
</tr>
<tr>
<td>City Hospital</td>
<td>8</td>
<td>2</td>
<td>3</td>
<td>15</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>Private Hospital</td>
<td>21</td>
<td>8</td>
<td>16</td>
<td>80</td>
<td>37</td>
<td>80</td>
</tr>
<tr>
<td>Community Clinic</td>
<td>23</td>
<td>89</td>
<td>16</td>
<td>80</td>
<td>39</td>
<td>85</td>
</tr>
<tr>
<td>University Clinic</td>
<td>11</td>
<td>42</td>
<td>3</td>
<td>15</td>
<td>14</td>
<td>30</td>
</tr>
<tr>
<td>Nursing Clinic - Independent</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Out Patient Department</td>
<td>13</td>
<td>50</td>
<td>7</td>
<td>35</td>
<td>20</td>
<td>44</td>
</tr>
<tr>
<td>Health Maintenance Organization</td>
<td>20</td>
<td>77</td>
<td>19</td>
<td>95</td>
<td>39</td>
<td>85</td>
</tr>
<tr>
<td>Schools including Head Start to High School</td>
<td>18</td>
<td>69</td>
<td>13</td>
<td>65</td>
<td>31</td>
<td>67</td>
</tr>
<tr>
<td>Industry</td>
<td>13</td>
<td>50</td>
<td>5</td>
<td>25</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Prisons</td>
<td>5</td>
<td>19</td>
<td>5</td>
<td>25</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Nursing Home-Extended Care Units</td>
<td>21</td>
<td>81</td>
<td>17</td>
<td>85</td>
<td>38</td>
<td>83</td>
</tr>
<tr>
<td>Adult and Children Homes and Hospitals</td>
<td>9</td>
<td>35</td>
<td>6</td>
<td>30</td>
<td>15</td>
<td>33</td>
</tr>
<tr>
<td>Rehabilitation Homes or Hospitals</td>
<td>4</td>
<td>15</td>
<td>10</td>
<td>50</td>
<td>14</td>
<td>30</td>
</tr>
</tbody>
</table>

¹Schools with Interprofessional Learning Opportunities.

²Schools without Interprofessional Learning Opportunities.

*Represents percent of schools in column, not of total respondents.
with associated university clinics and university hospitals.

More schools without interprofessional learning indicated utilization of the nontraditional health care center—the Health Maintenance Organization. Perhaps these organizations were less likely to be associated with traditional university, university hospital and medical schools.

Location of schools with interprofessional learning in larger metropolitan areas near industrial sites may explain the greater frequency of selection of industry for such programs. The question of whether or not available or selected clinical sites affected the curriculum in terms of introduction to concepts of interprofessionalism was certainly not definitely answered by the data collected in this study. It seemed logical, however, that when agencies existed in which professionals were truly collaborating, the opportunities for identification of role models for student observation was possible. This may lead to introduction and establishment of learning experiences for associated students. Unfortunately, Rosenauer and Fuller indicated, that when these role models do not exist, effective learning of interprofessional skills by interprofessional teams of students does not occur.

Other Health Professions Programs under Same Institutional Administration

A study of interprofessional learning opportunities available for baccalaureate nursing students would not be complete if it did not look at the potential collaborators in health care education residing in the same institution.

1Rosenauer and Fuller, "Teaching Strategies for Interdisciplinary Education," pp. 159-162.
When one reviews the literature it seems that much of the educational collaboration described is aimed at development of the health care team. For the most part team examples have involved nursing with medicine, social work, and psychology.

There are, however, in the work setting many other health professionals who (potentially) collaborate with nurses. Nurses work with administrators, pharmacists, dietitians, ministers, educators and various therapists and technologists in addition to physicians, psychologists and social workers. This study has identified twenty-five other health profession programs (with baccalaureate or graduate education requirements) which existed on campuses with nursing programs and therefore fell under the same university administration (see Table 3).

For the most part the higher the degree of representation of other health professional programs on a campus, the greater the chance for collaboration to occur.

Specifically, a much higher number of schools which have interprofessional learning opportunities than those without such learning opportunities shared overall college or university administration with schools of medicine, pharmacy, physical therapy, physician associates, and respiratory therapy. These were curricula which apparently participated with nursing curricula in interprofessional learning most frequently.

There was, however, no guarantee that the presence of another health profession program on the campus will ensure interprofessional learning activities. Although there was much problem solving held in common between nursing students and students of Special Education, Clinical Psychology, Health Education, Speech Therapy, Nutrition and Medical Technology, apparently very little interprofessional learning occurred
Table 3

Other Health Professions Programs under Same University or College Administration

<table>
<thead>
<tr>
<th>Program</th>
<th>A1</th>
<th>B2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Psychology</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Dental Medicine</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>Gerontology</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Health Care Administration</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Law</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Medicine</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Podiatric Medicine</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Public Health</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Social Work</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Theology</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Veterinary Medicine</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Baccalaureate Minimum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Health</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Dental Hygienist/Nurse Practitioner</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Medical Record Librarian</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Medical Technologist</td>
<td>19</td>
<td>13</td>
</tr>
</tbody>
</table>
Table 3 (Continued)

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th></th>
<th>B</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%*</td>
<td>No.</td>
<td>%*</td>
</tr>
<tr>
<td>Baccalaureate Minimum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutritionist/Home Economist</td>
<td>10</td>
<td>39</td>
<td>7</td>
<td>35</td>
</tr>
<tr>
<td>Occupational Therapy</td>
<td>7</td>
<td>27</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>14</td>
<td>54</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Physician's Associate/Assistant</td>
<td>9</td>
<td>35</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Radiologic Technologist</td>
<td>4</td>
<td>15</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Respiratory Therapist</td>
<td>7</td>
<td>27</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Special Education/Health Education</td>
<td>9</td>
<td>35</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>Speech Therapy</td>
<td>7</td>
<td>27</td>
<td>8</td>
<td>40</td>
</tr>
</tbody>
</table>

126 Schools with Interprofessional Learning.

220 Schools without Interprofessional Learning.

*Represents percent of schools within the category and not of total respondents.
on many campuses where these students shared overall facilities.

Description of Interprofessional Learning Opportunities

One of the major purposes of this research study was to look carefully at the interprofessional learning opportunities offered across the country. Although various courses and/or total programs have been described in the literature, specific information about most programs has not generally been shared. This study attempted to collect such information about these programs which could have impact upon their effectiveness, and which could perhaps provide assistance to others considering development of interprofessional learning opportunities.

Characteristics of interprofessional learning which were described included:

1. Nature of the Program
2. Number of Individual Courses
3. Classification of Course Offerings
4. Level of Nursing Students Participating
5. Distribution of Nursing Student Enrollment in Interprofessional Learning
6. Strategy for Interprofessional Learning
7. Other Students Involved with Nursing Students, in Interprofessional Learning Activities
8. Responsibility for:
   a. Administration
   b. Financing
   c. Providing Facilities
   d. Initiation of Courses
   e. Selection of Faculty
   f. Development of Learning Objectives, Content, Strategy and Evaluation
9. Research
10. Past Experience with Interprofessional Learning Activities

The description of these characteristics of interprofessional learning opportunities was offered by only nineteen of the schools participating in the study. Unfortunately specific program data was not provided by seven of the twenty-six schools with interprofessional programs which originally offered to participate in the study. It is important to realize that this data relates to a very fluid and flexible commodity, and that changes are constantly occurring from semester to semester.

Nature of Interprofessional Programs

Review of the literature, information gathered during the exploratory study and the research study indicated that essentially three formats have been utilized to organize interprofessional learning activities: individual courses, a sequence, or series of individual courses, and a "core" curriculum.

This study indicated that the most frequent format was the offering of individual courses, by divisions (i.e. Health Science Centers) or by individual colleges, schools or departments, which were either required or optional for students of several professions.

In some situations a series of interprofessional courses was required for some professions but partially elective for others.

A small number of schools reported participation by their students in a "core" curriculum for several health professions programs, although in only one school was this comprehensive and inclusive of both lower and upper division work. For the most part the "core" curricula described tended to serve as a foundation for baccalaureate students of nursing and other allied health professions. Student opportunities for
Joint learning decreased after the first or second year when each profession pursued specialized content and clinical practice appropriate to it. In one situation interprofessional learning for students of nursing, medicine and pharmacy was planned to continue throughout their educational programs.

As mentioned earlier the most frequent format was the provision of individual courses. The majority of the nineteen responding schools (68%) actually provided only one or two individual courses, although six schools reported offering three or more courses with one even offering eight electives for student option.

The data was incomplete regarding the number of credits these courses carried. It appeared that the requirement of one or two 3 credit courses was most frequently cited. One school did specifically mention that students were required to take at least two courses, one of a general social or political nature and one with a specific clinical application. In this school the list of interprofessional courses varied from semester to semester, but at least five to six were available for undergraduate nursing students and no nursing courses were scheduled during the time frame established for interprofessional courses.

**Classification of Course Offerings**

At least eighty course titles were identified by schools responding to the initial preliminary survey (see Appendix C). Schools participating in the research study indicated that they offered forty-nine diverse courses which were classified according to their titles and descriptions.

The identified individual course offerings varied in objective and
title significantly. They have been grouped according to the following classification:

<table>
<thead>
<tr>
<th>Classification</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Social Science and Humanities</td>
<td>19</td>
<td>39</td>
</tr>
<tr>
<td>B. Political Science and Systems</td>
<td>14</td>
<td>29</td>
</tr>
<tr>
<td>C. Clinical Practice Focus</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>D. Research and Statistics</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>E. Natural and Applied Science</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>F. General Health Topics</td>
<td>8</td>
<td>16</td>
</tr>
</tbody>
</table>

The majority of the courses offered (39%) were identified as Social Science and Humanities and included such titles as "Human Behavior," "Human Awareness," "Human Relations and the Health Professions," "Sociology of Health and Illness," "Doctor, Nurse, Patient Relationship," and "Medical Sociology." The most frequently offered interprofessional course was "Human Sexuality" with students of nursing participating with a variety of other students. One school offered as many as four courses within this category, but the usual response was one, or two courses.

Twenty-nine percent of the courses offered were classified as "Political Science and Systems." This included such titles as "Health Polity Issues," "Organizations of Health Care," "Health Economics," "History of Medicine," and "Health Care Systems."

Eight of the participating schools indicated that they offered one course while three offered two courses which could be classified this way.

Four schools reported offering courses which involved clinical activities. These were primarily related to the processes of interviewing, and physical and mental diagnosis and were directed towards preparation for health care team practice.

Although several schools responding to the preliminary survey identified interprofessional course offerings related to "Research Methods"
such as "Biostatistics" and "Epidemiology," only one such course was identified by the schools participating in the study.

There were three courses offered which could be classified as "Natural and Applied Science" such as "Pharmacology" and "Pathophysiology." The remainder of the courses offered were classified within "General Health Topics," and "Special Problems." These were sometimes part of the core curriculum, such as "Introduction to Health," and "Fundamentals of Health," but in other cases were related to specific problems. "Gerontology," "Drugs and Society," and "Spanish for Health Professions" were some of the other courses within this category.

Level of Nursing Student Participating

The responses indicated that for the most part senior or fourth year nursing students are selected for participation in interprofessional learning activities. Third year students are somewhat less likely to be chosen for participation.

Many respondents did not complete the questionnaire. They listed the course but gave no further information. Of thirty course offerings listed by respondents in this part of the questionnaire, twenty included third and fourth year student involvement, with the possibility of graduate nursing student involvement as well (2 courses). In addition the level of students was identified as variable for four courses mentioned.

When a core curriculum was the format for interprofessional work the first and second year students were primarily involved. In only a few cases were first and second year students identified as participating in other interprofessional studies, and these were rarely with graduate level health profession students such as medicine or dentistry.
Other Students Involved with Nursing Students in Interprofessional Learning Activities

The other students involved with nursing students in interprofessional learning have been identified as representing both graduate and undergraduate levels of a diverse listing of health and social occupations (see Table 3).

The title of "profession" is usually given regardless of the educational level necessary for entry into the profession. Just as nursing does not require a graduate degree for professional status today, the various Allied Health Occupations may not.

Most often when we speak of the Health Professions, we speak of medicine, and dental medicine which require graduate study, and Nursing, Social Work and Physical Therapy which do not.

There are among the list of Allied Health Occupations identified a large group of "Therapists," and "Technologists" which do not require graduate work, although many members do have graduate study, primarily necessary for administration and teaching rather than for practice.

Nursing students also participate with students of other "professions" which are not considered the "health professions," such as law, theology, and teaching.

When attempting to summarize descriptions of which groups participate with nursing in interprofessional learning, the task is quite complex. The use of four categories has been employed: Health Professions--Graduate, Allied Health Professions--Graduate, Non-Health Professions--Graduate, and Allied Health Professions--Baccalaureate.

More than a third (36%) of nursing students who participated in the interprofessional learning described, participated with students of the other health professions at the graduate level such as medicine and
social work. Almost as frequently (31%) they participated with students of the allied health professions enrolled at the baccalaureate level. Less frequently they participate with graduate students of the Allied Health Professions, such as Physical Therapists (15%) and non-health professions such as law (18%). Often however, the identification of students varies from semester to semester.

Responsibility for Administration

The pattern for administration of interprofessional courses may be through: (1) central administration, (2) one individual department or school, (3) an interprofessional team, (4) representatives of two or more participating schools, or (5) an outside agency.

Of forty-eight courses described by respondents to this part of the survey thirty-one were administered by individual departments or schools, nine by central administration and four each by interprofessional team or representatives of two or more participating schools.

It is clear that in this study, the majority of courses were administered by faculty of the one department or school providing a course which was offered for students outside that department or school as well as for their own students.

Responsibility for Financing

Of the forty-eight courses described in this part of the survey, twenty were supported financially by central administration. This would imply that additional funds were provided to pay for salaries of participating faculty and/or outside lecturers. Eighteen were financed through the budgets of individual departments or school offering the interprofessional course with no additional renumeration. In seven of the cases the participating departments or schools shared the financial
responsibility equally. Respondents indicated that two courses were supported financially by outside funding agencies.

The number of courses supported by central administration was quite large and appeared to indicate a commitment by the institutions to a philosophy of interprofessionalism.

Responsibility for Facilities, Supplies and Equipment

Facilities necessary for interprofessional learning may include the provision of classroom and/or laboratory space, as well as equipment and supplies. Although it might appear that financial support implies provision of facilities, supplies and equipment, this might not be the case. Financial support for teaching personnel might be provided in one method, while special facilities are provided in another.

Of the forty-eight courses described twenty-four were provided with facilities, supplies and equipment by central administration. In twenty-one cases the individual departments or schools offering the course provided facilities, supplies and equipment. In only three courses these were provided through shared responsibilities of participating schools.

Responsibility for Initiation of Interprofessional Learning Activities

Of the forty-eight listed courses identified in this part of the questionnaire the faculty, or an individual faculty member in one department or school had introduced the concept of the course to the institution in twenty-two courses. Less frequently, in thirteen courses the faculty of two or more departments or schools had initiated the idea for the course. In only three cases had the students been involved in the initiation of an interprofessional course. In one
instance the course was initiated by outside agencies and faculty together with administration. In no cases had administration been the prime initiator. Respondents indicated that the initiation of interprofessional learning activities was unclear in eight cases.

This sample would seem to indicate that faculty of the various health professions were interested in teaching students other than of their own professions or were anxious for their students to have interprofessional learning experience with students of other professions.

Responsibility for Selection of Faculty

Although we recognize that faculty most often initiate interprofessional courses in which they then participate, it is also known that a course may be initiated by one department or school and others invited to participate. This would create the need for other faculty to participate.

Among the responses to this question of faculty selection, forty-two courses were described. In twenty-seven cases the faculty were volunteers, in thirteen the university administrators had appointed or recommended faculty to participate. In two instances faculty had been appointed by their peers within their own department or school.

For the most part therefore it was apparent that interprofessional teaching was a voluntary responsibility for educators in the health professions.

Responsibility for Development of Learning Objectives, Content, and Evaluation Strategies

There were forty-six courses described by the respondents to this question. In the large majority of cases the faculty of the sponsoring school as a group identified the learning objectives and then another
group or individuals apparently designed the content strategy and evaluation methods (see Table 4).

Table 4
Learning Objectives, Content Strategy and Evaluation

<table>
<thead>
<tr>
<th></th>
<th>Learning Objectives</th>
<th>Content Strategy and Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>Central Administration</td>
<td>- -</td>
<td>- -</td>
</tr>
<tr>
<td>Team or Committee</td>
<td>8 17.0</td>
<td>6 13.0</td>
</tr>
<tr>
<td>Faculty of More than 2 Schools</td>
<td>3 7.0</td>
<td>5 11.0</td>
</tr>
<tr>
<td>Faculty Sponsoring School</td>
<td>30 65.0</td>
<td>26 56.0</td>
</tr>
<tr>
<td>Individual Teaching Faculty Member</td>
<td>5 11.0</td>
<td>9 20.0</td>
</tr>
<tr>
<td>Total</td>
<td>46 100.0</td>
<td>46 100.0</td>
</tr>
</tbody>
</table>

Distribution of Nursing Student Enrollment in Interprofessional Learning

During 1975-76 the number of students identified by respondents as participating in interprofessional learning activities in individual courses was estimated to vary from as few as ten (especially in clinical practice courses) to more than two hundred. These estimates may vary significantly from year to year.

In this small sample there were eight courses offered which drew between one hundred and one hundred and fifty students. For the most part these were courses related to Political Science and Health Care
systems which tended to be lecture courses. The amount of interaction possible between students in such large groups is always open to question, and unless an interprofessional team of faculty is truly in action one cannot help but wonder whether the objectives of interprofessional education are really being met.

This data represents a possible enrollment of over two thousand students in interprofessional study including a possible total enrollment of eleven hundred nursing students in schools which offer interprofessional study at present, and which participated in this study. In effect this group of 1,100 may be considered to represent about 1 percent of all the one hundred and eight thousand students enrolled in baccalaureate nursing programs.¹

**Research**

Respondents were asked to indicate whether there was any research being conducted in relation to interprofessional learning. Seven schools with programs of interprofessional learning indicated that research was being conducted with involvement by the school of nursing faculty. Unfortunately no descriptions of research findings were offered by the respondents although the request had been made.

**Past Experience with Interprofessional Learning Activity**

Respondents were asked to indicate whether or not any interprofessional learning experiences were offered in the past five years which were now discontinued, the type of program and the major reasons for

discontinuation.

Among the forty-six responding schools, six social science and humanities courses, seventeen political science courses, and one clinical focus program had been previously offered but were now discontinued. Only eight respondents indicated reasons for discontinuation of previously held courses.

The reasons for discontinuation were for the most part multiple in nature but included:

1. Factors related to interprofessional faculty interest and relationships;
2. Disagreement about interprofessional objectives and philosophical incompatibility;
3. Inadequate faculty interest and time;
4. Scheduling difficulties.

Description of Respondents

Two hundred and one nurse educators in forty-six National League for Nursing accredited baccalaureate programs participated in the study. They were asked to describe their past and current academic preparation, clinical experience, nature of academic responsibility and involvement in interprofessional teaching (see Appendix I, Tables 18-32).

Current Academic Appointment or Administrative Title

Respondents indicated that they held a wide variety of titles such as: dean, assistant or associate dean, department chairman, professor, associate professor, assistant professor, instructor and project director.

The largest percentage of all respondents was identified as
assistant professors 42 percent, instructors 25 percent, associate professors (16 percent); and professors (2 percent) were represented to a lesser extent. A greater percentage of participants from schools with interprofessional learning than schools without such opportunities was department Chairman. Otherwise the percentages when compared between the groups were quite similar (see Appendix I, Table 18).

Current Teaching

Nurse educators who participate in this study were currently involved in teaching the traditional baccalaureate level clinical courses of Medical Surgical Nursing, Maternal Child Health, Psychiatric-Mental Health and Public Health or Community Nursing as well as multiple versions of integrated themes (see Appendix I, Table 19).

Twenty-two percent of faculty indicated that they taught medical-surgical nursing, 17 percent taught maternal or parental child health, 15 percent public health or community nursing, while 13 percent were involved primarily in teaching psychiatric mental health nursing. Twenty-three percent described their teaching as involving responsibility for teaching combinations or integrated themes of the above major clinical areas.

There was very little difference in teaching responsibility among faculty teaching in schools with interprofessional learning and those in other schools, however, the number of faculty teaching public health--community health nursing was twice the number in schools with interprofessional learning than in schools without such opportunities.

Years in Current Position

When reviewing the length of time nurse educators were employed in their current positions, a large proportion (72%) were in the position
under five years with 16 percent of them employed less than one year. The percentage of respondents with less than one year in schools with interprofessional learning was half the number in other schools, otherwise the percentages were similar (see Appendix I, Table 20).

Sex

The respondents were largely female with only 3 percent male (see Appendix I, Table 22).

Age

Nurse educators were especially reluctant to indicate their age in response to this survey. Forty-one percent preferred not to respond. Of those who did answer, the age range was twenty-three to fifty-nine. Forty-seven percent of these respondents were between thirty-one and forty years of age, 23 percent between twenty-three and thirty, and another 23 percent were between forty-one and fifty. Fifteen percent were over fifty (see Appendix I, Table 23).

Initial Education

The initial education for all nurse educators participating in the study was almost equally divided between diploma and baccalaureate education. A larger proportion of faculty in schools with interprofessional learning than those in schools without, were graduates of baccalaureate programs. This group outnumbered diploma graduates within their own schools. This relationship is reverse in schools without interprofessional learning, where diploma graduates outnumbered baccalaureate graduates (see Appendix I, Table 24).
Year of Initial Education

Over 70 percent of respondents indicated that they received their initial education during the last twenty-five years. Only 20 percent graduated from their basic nursing program before 1950. This could give some indication to their current age, if we assume they entered nursing education directly from high school at about the age of eighteen. Perhaps we might assume that of these seventy some percentage were under forty-five, with about 5 percent being clearly under thirty (see Appendix I, Table 25).

Highest Degree Held

The nurse educators who participated in this study were largely holders of the masters degree (82%), with the proportion among those in schools with interprofessional learning reaching 87 percent (see Table 5). Fourteen percent of all respondents were holders of the doctorate. A slightly larger percentage of respondents from schools without interprofessional learning held the doctorate. This was most likely due to the higher incidence of response from Deans and Chairman rather than faculty within this group.

It is interesting to note that the number of respondents holding the baccalaureate degree as their highest degree was much smaller among the group with interprofessional learning than among all National League for Nursing accredited programs.

When compared to all educators in National League for Nursing accredited Baccalaureate and Higher degree programs the proportion of nurse educators holding masters and doctoral degrees is higher among those who participated in this study.
Table 5

Highest Degree Held by Respondents

<table>
<thead>
<tr>
<th></th>
<th>Schools with Interprofessional Learning</th>
<th>Schools without Interprofessional Learning</th>
<th>Total Response</th>
<th>NLN Accredited Baccalaureate and Higher Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Doctorate*</td>
<td>14</td>
<td>12</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Masters**</td>
<td>106</td>
<td>87</td>
<td>58</td>
<td>72</td>
</tr>
<tr>
<td>Baccalaureate***</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Totals</td>
<td>121</td>
<td>100</td>
<td>79</td>
<td>100</td>
</tr>
</tbody>
</table>


**M.S., M.A., M.N., M.Ed., M.P.H.

***B.A., B.S., B.S.N.
Current Educational Involvement

A large proportion (75%) of faculty who participated in this study were also involved in concurrent educational activities. For the most part (48%) their work was not degree oriented, but 17% were involved in doctoral study. Four percent were seeking special certification (see Appendix I, Table 2).

Years of Teaching Experience

The educators who participated in this study had been involved in teaching for a good number of years. Thirty-four percent had more than ten years of teaching experience with 66% having over five years. Only 6% had under two years of teaching experience. It is interesting to compare this with the academic titles held by respondents, the majority held appointments of Assistant Professor or Instructor, the lowest ranks despite their many years of teaching experience (see Appendix I, Table 30).

Nursing Experience - Non-Teaching

The largest percentage of faculty (46%) who responded to the questionnaire had from two to five years of non-teaching nursing experience, 23% had six to ten years, 19% had eleven to twenty years of nursing experience and 7% of respondents had over twenty years. The difference among faculty between the groups was not remarkable. This might be considered a relatively smaller amount of non-teaching experience than teaching, but is consistent with our general knowledge of nursing faculty across the country. No specific data was available for comparisons to be made (see Appendix I, Table 31).
Involvement in Interprofessional Teaching in Other Institutions

Twenty-nine percent of all nurse educators who participated in the study had been involved in interprofessional teaching in other institutions, while 71 percent had not. The percentage was remarkably similar among respondents from both groups (see Appendix I, Table 32).

Evaluation of Interprofessional Collaboration

Nurse Educators were asked to evaluate their experience with interprofessional teaching and learning in terms of effect upon faculty and students, and based upon past and current experience (see Table 6).

A majority of respondents who had had experience with interprofessional teaching indicated that they believed such activities for faculty to be "highly rewarding," "stimulating and challenging," or "worthwhile." A small percentage believed these programs had "no significant effect upon faculty," "were not worth the time and effort" or were "frustrating."

When asked to evaluate the effect upon students, the response was similar. A large majority believed interprofessional learning experiences were valuable experiences for nursing students.

There was no difference between the responses of nurse educators in programs with interprofessional learning and those currently in programs without these opportunities, however it is important to emphasize that this question was appropriately answered only by nurse educators with past or current experience with interprofessional teaching and learning, and not by all respondents. In addition, some respondents had added informal notes referring to the stress of interprofessional work.
Table 6
Faculty Evaluation of Effect of Interprofessional Collaboration on Nurse Educators and Students

<table>
<thead>
<tr>
<th></th>
<th>Schools with Interprofessional Learning</th>
<th>Schools without Interprofessional Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Responding (104)</td>
<td>Total Responding (51)</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Highly Rewarding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>Student</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>Stimulating and Challenging</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty</td>
<td>48</td>
<td>40</td>
</tr>
<tr>
<td>Student</td>
<td>50</td>
<td>41</td>
</tr>
<tr>
<td>Worthwhile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty</td>
<td>29</td>
<td>24</td>
</tr>
<tr>
<td>Student</td>
<td>31</td>
<td>26</td>
</tr>
<tr>
<td>No Effect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Student</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Net Worth Time and Effort</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Student</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Detracted from</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role as Teacher</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Role as Nurse</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Role as Student</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Frustration and Hostility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Student</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
Nurse Educators Perceptions of Factors Promoting and Inhibiting Interprofessional Learning

Two hundred and one nurse educators in forty-six National League for Nursing accredited Baccalaureate nursing programs reported their perceptions of factors which promote and which inhibit efforts toward establishment and implementation of interprofessional learning opportunities. The factors related to administration, curriculum development and implementation, faculty, students and resources both on and off the campus.

These responses to the questionnaire represented the perceptions of one hundred and twenty-one nurse educators in schools which currently have interprofessional learning opportunities and eighty educators in schools which do not currently provide interprofessional learning opportunities for their students.

The number of responses from individual schools varied from one response to eleven, however the most commonly occurring rate of response was five responses from schools with current interprofessional programs and four from schools without such programs. A summary of responses to the questionnaire from the total group appears in Appendix J, Table 33.

The following factors were identified as primarily promoting interprofessional learning by more than 50 percent of the total sample.

**Administration**
- Philosophy of the Institution
- Purposes and Objectives of the Institution

**Curriculum Development and Implementation**
- Philosophy of the Nursing Program
- Objectives of the Nursing Curriculum
- Structure of the Curriculum in Nursing

**Faculty**
- Interest of Nursing Faculty
- Nursing Faculty Ability to Accept Leadership
- Nursing Faculty Willingness to Accept Leadership
Only one factor was identified as primarily inhibiting interprofessional learning by more than 50 percent of the total sample. This was: "Time available for Nursing faculty involvement" which was identified under the group of "faculty" related factors. "Funding for Experimental program," in the category of resources was reported as "inhibiting" by 49 percent of respondents.

It is interesting to note the response of the total sample of nurse educators to statements related to factors promoting and inhibiting interprofessional learning.

More than half 50 percent express agreement with the following statements.

Administration
"This institution is willing to experiment with new and innovative programs."

Faculty: Philosophy and Attitudes
"We can no longer educate students of the Health Professions in isolation."

"Before nursing and other health professions, students can learn to work collaboratively with each other, faculty from each discipline must learn to work together."

"Sexism is an inhibiting factor in education for health care."

"Optimal health care is best provided to the consumer by interprofessional teams."
Students
"Students of the health professions need to learn together to develop positive attitudes and behaviors from the beginning and avoid stereotyping and rigid roles."

"Nursing students on this campus are really capable of full participation in interprofessional activities."

Curriculum
"Nursing will never be a true profession until it demands the baccalaureate degree as its minimum requirement."

"Health related educational programs would really be enriched by providing shared experiences involving students from several health professions."

More than 50 percent express a level of disagreement with the following statements.

Administration
"Rigid administrative procedures here are a barrier to collaboration."

Faculty Philosophy and Attitudes
"I don't think I am qualified to teach students of other health professions."

"Once other health professions are involved in nursing education the nursing faculty has lost some control of the educational product."

"Nursing faculty have more than enough responsibility teaching nursing."

Students
"Nursing students are in a less equal position on a student health care team."

Curriculum
"Interprofessional collaborative education belongs at the graduate level not at the undergraduate level."

Resources
"It is too expensive to attempt to educate students of the health professions together."
Perceptions of Faculty in Schools with Current Interprofessional Learning Compared with Perceptions of Faculty in Schools without Current Interprofessional Learning

Administration

Nurse educators in schools with current programs of interprofessional learning reported that they strongly believe the philosophy (75%), purposes and objectives (74%) of their institutions promote interprofessional learning. They did not indicate the same kind of confidence when discussing the interest (48%) and support (47%) from central administration (see Table 7).

There appeared to be uncertainty about the role of administration, however, for while recognizing that administrative procedures were not a barrier to collaboration on their campuses, and that these institutions were willing to experiment with new and innovative programs, 51 percent reported that their institutions "speak collaboration but practice isolation."

Nurse educators in schools without current programs of interprofessional learning reported less confidence than their peers (in the former type of schools) in the promoting ability of the institutional administration in relation to interprofessional learning, however, over 50 percent still maintained that the philosophy, purposes and objectives of the institution were promoting factors.

They too believed that administrative procedures were not a barrier to collaboration, and that their institutions were willing to experiment with new and innovative programs. Although they did not have current programs of interprofessional learning 42 percent disagreed that their institutions "speak collaboration but practice isolation," while 46 percent agreed with this statement.
Table 7
Administration Factors Perceived as Promoting and Inhibiting Interprofessional Learning

<table>
<thead>
<tr>
<th>Administration</th>
<th>Primarily Promoting</th>
<th>No Effect</th>
<th>Don't Know</th>
<th>Primarily Inhibiting</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Philosophy of the Institution</td>
<td>A</td>
<td>91</td>
<td>75</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>51</td>
<td>64</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Purposes and Objectives of the Institution</td>
<td>A</td>
<td>90</td>
<td>74</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>53</td>
<td>66</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Interest of Central Administration Personnel</td>
<td>A</td>
<td>58</td>
<td>48</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>35</td>
<td>44</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Support from Central Administration</td>
<td>A</td>
<td>57</td>
<td>47</td>
<td>21</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>35</td>
<td>44</td>
<td>13</td>
<td>16</td>
</tr>
</tbody>
</table>

A = Schools with Current Interprofessional Learning.
B = Schools without Current Interprofessional Learning.
Table 8
Administration Factors Perceived as Promoting and Inhibiting Interprofessional Learning

<table>
<thead>
<tr>
<th>Administration</th>
<th>Strongly Agree No.</th>
<th>Strongly Agree %</th>
<th>Not Certain No.</th>
<th>Not Certain %</th>
<th>Disagree No.</th>
<th>Disagree %</th>
<th>Strongly Disagree No.</th>
<th>Strongly Disagree %</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid Administrative Procedures here are a barrier to collaboration</td>
<td>A 10</td>
<td>8</td>
<td>27</td>
<td>22</td>
<td>23</td>
<td>19</td>
<td>51</td>
<td>42</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>B 5</td>
<td>6</td>
<td>14</td>
<td>18</td>
<td>16</td>
<td>20</td>
<td>38</td>
<td>48</td>
<td>-</td>
</tr>
<tr>
<td>This institution is willing to experiment with new and innovative programs</td>
<td>A 34</td>
<td>28</td>
<td>56</td>
<td>46</td>
<td>20</td>
<td>17</td>
<td>9</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>B 12</td>
<td>15</td>
<td>43</td>
<td>54</td>
<td>19</td>
<td>24</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>This institution speaks collaboration but practices isolation</td>
<td>A 12</td>
<td>10</td>
<td>49</td>
<td>41</td>
<td>21</td>
<td>17</td>
<td>31</td>
<td>26</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>B 10</td>
<td>13</td>
<td>26</td>
<td>33</td>
<td>9</td>
<td>11</td>
<td>30</td>
<td>38</td>
<td>3</td>
</tr>
</tbody>
</table>

A = Schools with Current Interprofessional Learning.
B = Schools without Current Interprofessional Learning.
A significant difference between the two groups of responses occurred only in the area of institutional philosophy and this difference appears to represent a larger response by educators in schools without interprofessional learning that they do not know the effect of this factor.

Since approximately one-third of respondents of both groups were unwilling to take a position and almost half the respondents of both groups believed the administration would support interprofessional learning it seemed unlikely that this factor played a major role in the establishment of interprofessional activities.

Faculty

The majority of nurse faculty in schools with current programs of interprofessional learning identified the following factors relating to faculty as primarily promoting interprofessional learning.

They believed the interest of nursing faculty, the ability and willingness of nursing faculty to accept leadership roles, the educational preparation of faculty and nursing faculty attitudes toward other professions as promoting factors.

Sixty-five percent of these respondents indicated, however, that there is insufficient time for nursing faculty involvement in interprofessional learning and therefore that this was an inhibiting factor. Almost half 47 percent, also indicated that another inhibiting factor was the attitudes of other professions toward nursing.

These respondents almost unanimously agreed that students of the health care professions could no longer be educated in isolation, that faculty must first learn to work together before students can be expected to, and that optimal health care was best provided to the
Table 9
Faculty Factors Perceived as Promoting and Inhibiting Interprofessional Learning

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Primarily Promoting</th>
<th>No Effect</th>
<th>Don't Know</th>
<th>Primarily Inhibiting</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.  %</td>
<td>No.  %</td>
<td>No.  %</td>
<td>No.  %</td>
<td></td>
</tr>
<tr>
<td>Interest of Nursing Faculty A</td>
<td>92  76</td>
<td>10  8</td>
<td>6  5</td>
<td>11  9</td>
<td>8.23</td>
</tr>
<tr>
<td></td>
<td>50  63</td>
<td>5  6</td>
<td>6  8</td>
<td>13  16</td>
<td></td>
</tr>
<tr>
<td>Interest of Non-Nursing Faculty A</td>
<td>51  42</td>
<td>4  3</td>
<td>41  34</td>
<td>20  17</td>
<td>4.36</td>
</tr>
<tr>
<td></td>
<td>25  31</td>
<td>6  8</td>
<td>28  35</td>
<td>15  19</td>
<td></td>
</tr>
<tr>
<td>Time Available for Nursing Faculty</td>
<td>18  15</td>
<td>11  9</td>
<td>8  7</td>
<td>78  65</td>
<td>3.76</td>
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<tr>
<td></td>
<td>8  10</td>
<td>3  4</td>
<td>6  8</td>
<td>57  71</td>
<td></td>
</tr>
<tr>
<td>Time Available Faculty--Other Health</td>
<td>20  17</td>
<td>5  4</td>
<td>46  38</td>
<td>43  36</td>
<td>1.79</td>
</tr>
<tr>
<td></td>
<td>10  13</td>
<td>6  8</td>
<td>31  39</td>
<td>27  34</td>
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<tr>
<td>Interpersonal Factors</td>
<td>51  42</td>
<td>10  8</td>
<td>24  20</td>
<td>31  26</td>
<td>2.57</td>
</tr>
<tr>
<td></td>
<td>33  41</td>
<td>6  8</td>
<td>18  23</td>
<td>16  20</td>
<td></td>
</tr>
<tr>
<td>Nursing Faculty Ability to Accept</td>
<td>83  69</td>
<td>5  4</td>
<td>9  7</td>
<td>19  16</td>
<td>1.64</td>
</tr>
<tr>
<td>Leadership</td>
<td>50  63</td>
<td>3  4</td>
<td>5  6</td>
<td>17  21</td>
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</table>
Table 9 (Continued)

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Primarily Promoting No.</th>
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<th>Don't Know No.</th>
<th>Primarily Inhibiting No.</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Faculty Willingness to Accept Leadership</td>
<td>A</td>
<td>75</td>
<td>62</td>
<td>7</td>
<td>9</td>
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<tr>
<td></td>
<td>B</td>
<td>36</td>
<td>45</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Concept of Professional Autonomy</td>
<td>A</td>
<td>59</td>
<td>49</td>
<td>8</td>
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</tr>
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<td></td>
<td>B</td>
<td>36</td>
<td>45</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Educational Preparation of Nursing Faculty</td>
<td>A</td>
<td>62</td>
<td>51</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>38</td>
<td>48</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Attitudes of Nursing Faculty Toward Other Professions</td>
<td>A</td>
<td>78</td>
<td>65</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>51</td>
<td>64</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Attitudes of Other Professions toward Nursing</td>
<td>A</td>
<td>33</td>
<td>27</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24</td>
<td>30</td>
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<td>5</td>
</tr>
</tbody>
</table>

A = Schools with Current Interprofessional Learning.
B = Schools without Current Interprofessional Learning.
### Table 10

**Faculty Factors Perceived as Promoting and Inhibiting Interprofessional Learning**

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Once other health professions are involved in nursing education, the nursing faculty has lost some control of the educational products</td>
<td>A</td>
<td>2</td>
<td>18</td>
<td>15</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>-</td>
<td>10</td>
<td>13</td>
<td>16</td>
<td>20</td>
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<tr>
<td>Stratification and dominance among the health professions will never be eliminated</td>
<td>A</td>
<td>1</td>
<td>27</td>
<td>22</td>
<td>53</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>-</td>
<td>13</td>
<td>16</td>
<td>36</td>
<td>45</td>
</tr>
<tr>
<td>Optimal health care is best provided to the consumer by interprofessional teams</td>
<td>A</td>
<td>69</td>
<td>57</td>
<td>47</td>
<td>39</td>
<td>5</td>
</tr>
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<td></td>
<td>B</td>
<td>38</td>
<td>48</td>
<td>38</td>
<td>48</td>
<td>2</td>
</tr>
<tr>
<td>Nursing faculty have more than enough responsibility teaching nursing</td>
<td>A</td>
<td>1</td>
<td>1</td>
<td>18</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>4</td>
<td>5</td>
<td>10</td>
<td>13</td>
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*p > 0.01.
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<th>Agree</th>
<th>Not Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Chi Square</th>
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</thead>
<tbody>
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<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
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<td></td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>We can no longer educate students of the H.C.P. in isolation</td>
<td>90</td>
<td>74</td>
<td>28</td>
<td>23</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>52</td>
<td>65</td>
<td>23</td>
<td>29</td>
<td>4</td>
</tr>
<tr>
<td>Sexism is an inhibiting factor in education for Health Care</td>
<td>22</td>
<td>18</td>
<td>47</td>
<td>39</td>
<td>17</td>
<td>14</td>
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<tr>
<td></td>
<td>A</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>10</td>
<td>13</td>
<td>31</td>
<td>39</td>
<td>13</td>
</tr>
<tr>
<td>Before nursing and other health profession students can learn to work</td>
<td>66</td>
<td>55</td>
<td>46</td>
<td>38</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>collaboratively with each other faculty from each discipline must</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>learn to work together</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>45</td>
<td>56</td>
<td>29</td>
<td>36</td>
<td>3</td>
</tr>
<tr>
<td>I don't think I am qualified to teach students of other health</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>8</td>
<td>7</td>
</tr>
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<td>professions</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
<td>B</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

A = Schools with Current Interprofessional Learning.

B = Schools without Current Interprofessional Learning.

**p > 0.0005.
Table 10 (Continued)

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Strongly Agree No.</th>
<th>Strongly Agree %</th>
<th>Agree No.</th>
<th>Agree %</th>
<th>Not Certain No.</th>
<th>Not Certain %</th>
<th>Disagree No.</th>
<th>Disagree %</th>
<th>Strongly Disagree No.</th>
<th>Strongly Disagree %</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would rather work here than any other place I can think of</td>
<td>A</td>
<td>11</td>
<td>9</td>
<td>27</td>
<td>22</td>
<td>13</td>
<td>11</td>
<td>55</td>
<td>46</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>11</td>
<td>14</td>
<td>30</td>
<td>38</td>
<td>7</td>
<td>9</td>
<td>26</td>
<td>33</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>The nursing profession should clarify its functions before it attempts to develop interprofessional learning opportunities</td>
<td>A</td>
<td>20</td>
<td>17</td>
<td>38</td>
<td>31</td>
<td>35</td>
<td>29</td>
<td>22</td>
<td>18</td>
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<tr>
<td></td>
<td>B</td>
<td>17</td>
<td>21</td>
<td>32</td>
<td>40</td>
<td>18</td>
<td>23</td>
<td>10</td>
<td>13</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

A = Schools with Current Interprofessional Learning.

B = Schools without Current Interprofessional Learning.
They strongly believed that they were qualified to teach students of other health professions (90%), and to a smaller degree that sexism was an inhibiting factor in education for health care (57%). They were not concerned that once other health professions were involved in nursing education they would lose control of the educational products (67%).

Forty-four percent were not certain that stratification and dominance among the health professions would ever be eliminated.

Evidently committed to interprofessional teaching as they were they did not agree that nursing faculty "have more than enough responsibility teaching nursing," therefore inhibiting participation in interprofessional activities.

Nursing educators in schools without current interprofessional learning activities expressed somewhat similar responses to the questionnaire as their peers in schools with such programs.

More than half indicated that interest of nursing faculty, nursing faculty ability to accept leadership, and attitudes of nursing faculty toward other professions were promoting factors. With even greater agreement 71 percent, than their peers in schools with programs of interprofessional activities they found the "time available" for nursing faculty involvement in interprofessional activities as an inhibiting factor.

A majority of nurse educators in these schools expressed agreement that students of the health care professions should no longer be educated in isolation, that sexism was an inhibiting factor, that faculty must learn to work together before students of the health professions can learn to work collaboratively, and that optimal health care is best provided to the consumer by interprofessional teams.
Sixty-one percent of these respondents also expressed the belief that the nursing profession should clarify its functions before it attempts to develop interprofessional learning opportunities.

This group also believed for the most part that they were qualified to teach students of the other health professions but their level of expression was definitely not as strong as those in schools with interprofessional activities. They were not especially concerned with the loss of control of their educational product if other health professions were involved in nursing education.

When compared with their peers in schools with interprofessional learning activities, this group indicated greater satisfaction with their current work situation. More than half reported that they would rather work in their current employing site than any other place. More than half of nurse educators in school with interprofessional learning indicated they would rather work elsewhere. It might appear therefore that participation in interprofessional activities does not necessarily lead to greater job satisfaction.

There was a significant difference between the groups in only two areas. The difference in response to "Nursing faculty have more than enough responsibility teaching nursing" appeared to reflect the strength of commitment to interprofessional teaching and learning which educators in schools with such opportunities are already demonstrating. The difference in response relating to qualification to teach students of other health professions appears to reflect only the degree of disagreement.

Students

Nurse educators in schools with current interprofessional learning
activities strongly believed in their students. Between 77 percent and 89 percent indicated that the educational preparation, personality characteristics, special interests, and attitude of nursing students were all promoting factors toward collaboration. More than half of these respondents indicated their disagreement with the statement, "Nursing students are in a less equal position on a student health care team."

This group also seemed to indicate that their students could handle interprofessional learning, and more than 80 percent expressed confidence in the capability of their students for full participation in interprofessional activities.

Nurse educators in schools without current interprofessional learning opportunities also expressed confidence in their students' abilities to handle interprofessional activities although to a lesser degree than their peers in schools with current opportunities.

They overwhelmingly (96%) agreed that students of the health professions need to learn together to develop positive attitudes and behaviors from the beginning and avoid stereotyping and rigid roles. Almost half, however, expressed agreement that role sophistication was beneficial before exposure to interprofessional activities. They recognized their students' capabilities for full participation in interprofessional activities (80%), while 75 percent did not believe nursing students were in a less equal position on a student health care team. They acknowledged that the attitude, personality characteristics, and special interests of nursing students were primarily promoting, however, their enthusiasm was not as great as their peers in schools with current interprofessional activities.

This group indicated less knowledge of the attitudes of other health profession students toward nursing, therefore reported more often
### Table 11

**Student Factors Perceived as Promoting and Inhibiting Interprofessional Learning**

<table>
<thead>
<tr>
<th>Students</th>
<th>Primarily Promoting</th>
<th>No Effect</th>
<th>Don't Know</th>
<th>Primarily Inhibiting</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Educational Preparation of Nursing Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>93</td>
<td>77</td>
<td>6</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>B</td>
<td>58</td>
<td>73</td>
<td>5</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Personality Characteristics of Nursing Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>94</td>
<td>78</td>
<td>5</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>B</td>
<td>55</td>
<td>69</td>
<td>6</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Special Interests of Nursing Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>93</td>
<td>78</td>
<td>7</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>B</td>
<td>52</td>
<td>65</td>
<td>6</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Attitude of Nursing Students Toward Collaboration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>107</td>
<td>89</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>B</td>
<td>59</td>
<td>74</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Attitude of Other Health Profession Students Toward Nursing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>44</td>
<td>36</td>
<td>5</td>
<td>4</td>
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<td>B</td>
<td>21</td>
<td>26</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

A = Schools with Current Interprofessional Learning.

B = Schools without Current Interprofessional Learning.

* *p > 0.04.*

** p > 0.01.
Table 12

Student Factors Perceived as Promoting and Inhibiting Interprofessional Learning

<table>
<thead>
<tr>
<th>Students</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students of the health professions need to learn together to develop</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>positive attitudes and behaviors from the beginning and avoid</td>
<td>82 (67%)</td>
<td>33 (27%)</td>
<td>3 (3%)</td>
<td>2 (2%)</td>
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<td>6.919</td>
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<tr>
<td>stereotyping and rigid roles</td>
<td>45 (56%)</td>
<td>32 (40%)</td>
<td>2 (3%)</td>
<td>1 (1%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students would benefit by increased role sophistication before being</td>
<td>21 (17%)</td>
<td>25 (21%)</td>
<td>25 (21%)</td>
<td>41 (34%)</td>
<td>8 (7%)</td>
<td>4.971</td>
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<tr>
<td>exposed to interprofessional activities</td>
<td>11 (14%)</td>
<td>25 (31%)</td>
<td>17 (21%)</td>
<td>25 (31%)</td>
<td>2 (3%)</td>
<td></td>
</tr>
<tr>
<td>Nursing students on this campus are really capable of full participation</td>
<td>43 (36%)</td>
<td>58 (48%)</td>
<td>11 (9%)</td>
<td>8 (7%)</td>
<td>1 (1%)</td>
<td>4.85</td>
</tr>
<tr>
<td>in interprofessional activities</td>
<td>21 (26%)</td>
<td>42 (53%)</td>
<td>9 (11%)</td>
<td>5 (6%)</td>
<td>1 (1%)</td>
<td></td>
</tr>
<tr>
<td>Nursing students are in a less equal position on a student health care</td>
<td>6 (5%)</td>
<td>33 (27%)</td>
<td>11 (9%)</td>
<td>39 (32%)</td>
<td>31 (26%)</td>
<td>10.31</td>
</tr>
<tr>
<td>team</td>
<td>1 (1%)</td>
<td>11 (14%)</td>
<td>15 (19%)</td>
<td>32 (40%)</td>
<td>20 (25%)</td>
<td></td>
</tr>
</tbody>
</table>

A = Schools with Current Interprofessional Learning.

B = Schools without Current Interprofessional Learning.
that they did not know the effect, and less frequently that these attitudes were inhibiting. A small number of respondents did not respond to this part of the questionnaire.

The difference in response between the two groups occurred in relation to two factors: attitude of nursing students toward collaboration, and attitude of other health profession students toward nursing. Regarding the first factor, the difference appears to be primarily due to the degree of identification of attitudes of nursing students toward collaboration as a promoting factor. Clearly less educators in schools without programs view this as promoting.

The other area of difference occurring in the factor related to attitudes of other health professions students toward nursing appeared to be the strong "don't know" response found among educators in schools not offering interprofessional activities currently.

Curriculum Development and Implementation

The majority of nurse educators in schools with current interprofessional learning who responded to the questionnaire (85%) reported that the philosophy and objectives of their nursing programs were primarily promoting of interprofessional learning. This majority opinion was not in effect however when considering the structure and flexibility of the nursing curriculum, where almost 40 percent of respondents indicated these factors were inhibiting. Yet, 50 percent reported that the structure of the curriculum was promoting, while 46 percent indicated that flexibility of the nursing curriculum promoted interprofessional learning.

Approximately half of the respondents reported that they could not categorize the philosophy, structure and flexibility of other health
<table>
<thead>
<tr>
<th>Curriculum Development and Implementation</th>
<th>Primarily Promoting No.</th>
<th>No. Effect</th>
<th>Don't Know</th>
<th>Primarily Inhibiting No.</th>
<th>Chi Square</th>
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</thead>
<tbody>
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<td>Philosophy of the Nursing Program</td>
<td>A 103 85 4 5</td>
<td>6 5 4 3</td>
<td>5 4</td>
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<tr>
<td></td>
<td>B 58 73 2</td>
<td>6 8 2 3</td>
<td>9 11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objectives of the Nursing Curriculum</td>
<td>A 102 84 4</td>
<td>6 5 4 3</td>
<td>7 6</td>
<td>9.47*</td>
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</tr>
<tr>
<td></td>
<td>B 56 70 1</td>
<td>7 9 1 1</td>
<td>11 14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philosophy of Other Health Profession Curricula</td>
<td>A 40 33 5</td>
<td>4 3 5 1</td>
<td>48 15 8 10</td>
<td>3.13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B 21 26 4</td>
<td>5 5 1 1</td>
<td>11 14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structure of the Curriculum in Nursing</td>
<td>A 61 50 8</td>
<td>7 3 3 45 37*</td>
<td>47 39*</td>
<td>1.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B 42 53 5</td>
<td>6 1 1 27 34</td>
<td>29 35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexibility of the Curriculum in Nursing</td>
<td>A 56 46 8</td>
<td>7 5 4 47 39*</td>
<td>47 39*</td>
<td>0.73</td>
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<tr>
<td></td>
<td>B 38 48 5</td>
<td>6 4 5 28 35</td>
<td>28 35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structure of Other Health Profession Curricula</td>
<td>A 17 14 2</td>
<td>2 2 59 49 35 29</td>
<td>3.54</td>
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</tr>
<tr>
<td></td>
<td>B 13 16 1</td>
<td>1 1 46 58 14 18</td>
<td>28 35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexibility of Other Health Profession Curricula</td>
<td>A 20 17 2</td>
<td>2 2 60 50 34 28</td>
<td>3.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B 11 14 2</td>
<td>3 47 59 15 19</td>
<td>28 35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A = Schools with Current Interprofessional Learning.  
B = Schools without Current Interprofessional Learning.  

* p > 0.05.
Table 14
Curriculum Factors Perceived as Promoting and Inhibiting Interprofessional Learning

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Strongly Agree No.</th>
<th>Strongly Agree %</th>
<th>Agree No.</th>
<th>Agree %</th>
<th>Not Certain No.</th>
<th>Not Certain %</th>
<th>Disagree No.</th>
<th>Disagree %</th>
<th>Strongly Disagree No.</th>
<th>Strongly Disagree %</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing will never be a true profession until it demands the baccalaureate degree as its minimum requirement</td>
<td>A 57 47</td>
<td>40 33</td>
<td>15 12</td>
<td>6 5</td>
<td>1 1</td>
<td>9.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B 38 48</td>
<td>30 38</td>
<td>2 3</td>
<td>8 10</td>
<td>2 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interprofessional collaborative education belongs at the graduate level not at the undergraduate level</td>
<td>A 3 3</td>
<td>4 3</td>
<td>3 3</td>
<td>60 50</td>
<td>50 41</td>
<td>23.47*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B 1 1</td>
<td>6 8</td>
<td>12 15</td>
<td>48 60</td>
<td>13 16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health professional schools should modify their curricula to permit student teams to work together</td>
<td>A 44 36</td>
<td>70 58</td>
<td>7 6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10.9**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B 14 18</td>
<td>55 60</td>
<td>10 12</td>
<td>1 1</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health related educational programs would really be enriched by providing shared experiences involving students from several health professions</td>
<td>A 74 61</td>
<td>44 36</td>
<td>3 3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6.94***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B 34 43</td>
<td>44 55</td>
<td>2 2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A = Schools with Current Interprofessional Learning. *p > 0.003. **p > 0.01.
B = Schools without Current Interprofessional Learning. ***p > 0.03.
professions curricula.

A large majority of these respondents expressed agreement that nursing would not become a true profession until it required the baccalaureate degree as its bases, that health professions curricula needed modification in order to facilitate the development of student health care teams, and that shared experiences among the students of the various health professions would indeed enrich their prospective educational programs.

Ninety-one percent did not believe that interprofessional collaborative education belonged primarily at the graduate level. They believed therefore, that it should be initiated at the undergraduate level for nursing.

Nurse educators in schools without current interprofessional learning opportunities expressed concurrence with their peers in schools with such opportunities but to a lesser degree. Seventy-three percent agreed that the philosophy of their program was primarily promoting of interprofessional learning, while 70 percent indicated that the objectives of their curriculum were indeed promoting. Slightly more than half reported that the structure of the nursing curriculum promoted interprofessional learning while almost half indicated the flexibility of the curriculum was promoting. On the other hand, 34 percent reported the structure inhibiting while 35 percent indicated the flexibility of the curriculum inhibiting development of interprofessional learning activities.

Again a large group of these respondents, between 50 percent and 60 percent were not knowledgeable regarding the philosophy, structure and flexibility of other health profession curricula.

The response from these nurse educators, like their peers in schools
with interprofessional learning, indicated general agreement that the nursing profession needed the baccalaureate degree as its minimum requirement, that health profession schools needed to modify their curricula to permit interprofessional activities and that curricula were enriched when diverse students shared learning experience.

The differences in response among the groups occurred in relation to one factor, "objectives of the nursing curriculum." Educators in schools without current interprofessional learning evidently did not perceive this factor to be as promoting as their colleagues in schools with current interprofessional opportunities. A larger percentage evidently believed that the objectives of the nursing curriculum do not include interprofessional learning opportunities.

There was also a significant difference among groups in response to three statements. The groups did not express the same level or degree of disagreement with the concept of interprofessional collaboration belonging at the graduate not undergraduate level. The level of expressed support for curricular changes to allow for shared learning experiences and development of student teams was not as strong among faculty in schools not currently offering interprofessional opportunities.

Resources and Facilities

Almost half of nurse educators in schools with current interprofessional activities indicated that funding for experimental programs and research was insufficient and that this was an inhibiting factor when considering development of such programs. Approximately one quarter of respondents reported that funding for interprofessional programs was apparently available, while another 25 percent did not know whether this
Table 15

Resource and Facility Factors Perceived as Promoting and Inhibiting Interprofessional Learning

<table>
<thead>
<tr>
<th>Resources and Facilities</th>
<th>Primarily Promoting No.</th>
<th>Primarily Promoting %</th>
<th>No Effect No.</th>
<th>No Effect %</th>
<th>Don't Know No.</th>
<th>Don't Know %</th>
<th>Primarily Inhibiting No.</th>
<th>Primarily Inhibiting %</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding for Experimental Programs</td>
<td>A</td>
<td>30</td>
<td>25</td>
<td>7</td>
<td>6</td>
<td>25</td>
<td>21</td>
<td>56</td>
<td>46*</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>13</td>
<td>16</td>
<td>4</td>
<td>5</td>
<td>16</td>
<td>20</td>
<td>42</td>
<td>53</td>
</tr>
<tr>
<td>Funding for Interprofessional Programs</td>
<td>A</td>
<td>29</td>
<td>24</td>
<td>7</td>
<td>6</td>
<td>30</td>
<td>25</td>
<td>52</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>12</td>
<td>15</td>
<td>38</td>
<td>48</td>
<td>5</td>
<td>6</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>Funding for Research</td>
<td>A</td>
<td>23</td>
<td>19</td>
<td>13</td>
<td>11</td>
<td>26</td>
<td>22</td>
<td>56</td>
<td>46*</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>11</td>
<td>14</td>
<td>8</td>
<td>10</td>
<td>19</td>
<td>24</td>
<td>37</td>
<td>46</td>
</tr>
<tr>
<td>Audiovisual Services</td>
<td>A</td>
<td>80</td>
<td>66</td>
<td>4</td>
<td>3</td>
<td>13</td>
<td>11</td>
<td>22</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>50</td>
<td>63</td>
<td>7</td>
<td>9</td>
<td>3</td>
<td>4</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Secretarial Support</td>
<td>A</td>
<td>46</td>
<td>38</td>
<td>9</td>
<td>7</td>
<td>24</td>
<td>20</td>
<td>39</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>29</td>
<td>36</td>
<td>7</td>
<td>9</td>
<td>12</td>
<td>15</td>
<td>26</td>
<td>33</td>
</tr>
<tr>
<td>Room Space</td>
<td>A</td>
<td>45</td>
<td>37</td>
<td>8</td>
<td>7</td>
<td>15</td>
<td>18</td>
<td>47</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>22</td>
<td>28</td>
<td>7</td>
<td>9</td>
<td>11</td>
<td>14</td>
<td>34</td>
<td>43</td>
</tr>
</tbody>
</table>
Table 15 (Continued)

<table>
<thead>
<tr>
<th>Off Campus</th>
<th>Primarily Promoting No.</th>
<th>No Effect No.</th>
<th>Don't Know No.</th>
<th>Primarily Inhibiting No.</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location of Clinical Facilities</td>
<td>A  53 44</td>
<td>10 8</td>
<td>12 10</td>
<td>39 32</td>
<td>1.12</td>
</tr>
<tr>
<td>B  32 40</td>
<td>6 8</td>
<td>6 8</td>
<td>30 38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperation of Clinical Facilities</td>
<td>A  63 52</td>
<td>7 6</td>
<td>28 23</td>
<td>17 14</td>
<td>4.38</td>
</tr>
<tr>
<td>B  38 48</td>
<td>3 4</td>
<td>14 18</td>
<td>19 24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes of Personnel in Clinical Facilities</td>
<td>A  49 41</td>
<td>9 7</td>
<td>30 25</td>
<td>25 21</td>
<td>2.56</td>
</tr>
<tr>
<td>B  33 41</td>
<td>4 5</td>
<td>15 19</td>
<td>23 29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A = Schools with Current Interprofessional Learning.
B = Schools without Current Interprofessional Learning.

*p > .04.*
Table 16

Resource and Facility Factors Perceived as Promoting and Inhibiting Interprofessional Learning

<table>
<thead>
<tr>
<th>Resources and Facilities</th>
<th>Strongly Agree No.</th>
<th>Strongly Agree %</th>
<th>Not Certain No.</th>
<th>Not Certain %</th>
<th>Disagree No.</th>
<th>Disagree %</th>
<th>Strongly Disagree No.</th>
<th>Strongly Disagree %</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is too expensive to attempt to educate students of the</td>
<td>A</td>
<td>-</td>
<td>3</td>
<td>3</td>
<td>29</td>
<td>24</td>
<td>46</td>
<td>38</td>
<td>13.2*</td>
</tr>
<tr>
<td>health professions together</td>
<td>B</td>
<td>-</td>
<td>3</td>
<td>4</td>
<td>25</td>
<td>31</td>
<td>40</td>
<td>50</td>
<td>12</td>
</tr>
<tr>
<td>If outside funding were available, we would initiate a pro-</td>
<td>A</td>
<td>24</td>
<td>19</td>
<td>32</td>
<td>26</td>
<td>49</td>
<td>40</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>gram of interprofessional learning</td>
<td>B</td>
<td>7</td>
<td>9</td>
<td>18</td>
<td>22</td>
<td>47</td>
<td>59</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>If there were other health professional programs nearby</td>
<td>A</td>
<td>12</td>
<td>10</td>
<td>28</td>
<td>23</td>
<td>45</td>
<td>37</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>we would try to develop an interprofessional program</td>
<td>B</td>
<td>3</td>
<td>4</td>
<td>17</td>
<td>21</td>
<td>45</td>
<td>56</td>
<td>12</td>
<td>15</td>
</tr>
</tbody>
</table>

A = Schools with Current Interprofessional Learning.
B = Schools without Current Interprofessional Learning.

*p > 0.01.

**p > 0.03.
factor was promoting or inhibiting.

Nursing programs apparently did not have limitations in audiovisual services which would inhibit interprofessional activities. An almost equal response of 30 to 40 percent among promoting and inhibiting opinions occurred among these faculty when the support factors of secretarial help, room space, and location of clinical facilities were considered. Slightly more than half, however, indicated that the cooperation of clinical facilities promoted interprofessional activities. The attitudes of personnel in clinical facilities could be considered more promoting than inhibiting, since twice as many respondents reported this factor to be promoting than to be inhibiting.

These respondents did not believe the costs of educating students of the health professions together to be inhibiting, while 40 percent were not certain whether additional interprofessional programs would be established if outside funding were provided.

It is interesting to note that 37 percent of these respondents were not certain whether the proximity of other health professional programs would necessarily encourage them to develop an interprofessional program, although 33 percent concurred.

More than half of nurse educators in schools without current interprofessional learning opportunities reported that funding for experimental programs was inhibiting of such activities, yet almost half (48%) indicated that funding for interprofessional programs had no effect on whether a program was developed or not in their institutions, with 25 percent reporting this factor as inhibiting.

An equal number of respondents (46%) in these schools as in schools with current interprofessional programs indicated that funding for research was an inhibiting factor.
Respondents from these schools divided their responses almost equally between promoting and inhibiting, when considering the location of clinical facilities. While almost a fourth of the respondents indicated that cooperation of clinical facilities was an inhibiting factor twice as many reported that this was a promoting factor.

Slightly over 40 percent of nurse faculty from schools without interprofessional activities identified the attitudes of personnel in clinical facilities as promoting interprofessional activities although 29 percent indicated that this was an inhibiting factor.

Sixty-five percent of these respondents did not believe the costs of interprofessional education to be prohibitive, although 31 percent were not certain.

Almost 60 percent were not certain whether their school would initiate a program of interprofessional learning even if outside funding were provided and if there were other health professional programs nearby.

There is some difference in perception and opinions related to interprofessional teaching and learning expressed by participating nurse educators depending upon whether they are in schools which currently offer interprofessional learning or not. The areas of difference appeared to reflect the commitment these two groups have to interprofessional activities. In terms of costs of interprofessional education there was a level or degree of disagreement among groups regarding the statement that interprofessional education was too expensive yet members of both groups disagreed. Two other areas of difference occurred when considering whether interprofessional opportunities would be offered if outside funding were provided, or if other health professional programs were nearby. Much of the difference was reflected in the "not certain"
response. The level of agreement expressed by those in schools with current interprofessional activities obviously related to their commitment to the concept. Although the level of significance as measured by Chi Square statistic might be considered to predict that this association could be made for the total population of nurse educators, the volunteer sample surveyed may represent individuals more interested in interprofessional learning than exists in the total population and therefore any attempt to predict for the total population is probably unrealistic and at best unreliable.

**Selected Factors Influencing Interprofessional Learning**

It has been hypothesized that three major influencing forces promoting interprofessional learning would be: size of the institution (enrollment figures of a general as well as a specific nature), other professional education programs under the same overall administration, and availability of commonly utilized learning facilities such as: clinics or hospitals.

Eleven independent variables were selected from these areas and measured in terms of their influence upon occurrence of interprofessional learning activities. These variables were drawn from the many variables identified through the survey.

Since the most common members of a "health care team" in a general health delivery center could most likely be considered to be members of the medical, nursing, and social work professions, the presence of these programs in the educational setting was hypothesized to be influential variables. Most of the interprofessional learning programs described in the literature were concerned with student health team made up of med-
Table 17
Selected Factors Influencing Interprofessional Learning

<table>
<thead>
<tr>
<th>Variables</th>
<th>Multiple R.</th>
<th>R. Square</th>
<th>RSQ Change</th>
<th>Single R.</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine</td>
<td>0.43853</td>
<td>0.19231</td>
<td>0.19231</td>
<td>-0.43853</td>
<td>-0.33620</td>
</tr>
<tr>
<td>Physicians Associate</td>
<td>0.52368</td>
<td>0.27424</td>
<td>0.08193</td>
<td>-0.43256</td>
<td>-0.30303</td>
</tr>
<tr>
<td>Enrollment</td>
<td>0.60265</td>
<td>0.36318</td>
<td>0.08894</td>
<td>-0.23625</td>
<td>-0.38080</td>
</tr>
<tr>
<td>Clinical Psychology</td>
<td>0.63561</td>
<td>0.40399</td>
<td>0.04081</td>
<td>0.12516</td>
<td>0.27872</td>
</tr>
<tr>
<td>Social Work</td>
<td>0.65412</td>
<td>0.42788</td>
<td>0.02388</td>
<td>-0.14235</td>
<td>-0.14635</td>
</tr>
<tr>
<td>Total Enrollment</td>
<td>0.66614</td>
<td>0.44374</td>
<td>0.01586</td>
<td>0.28394</td>
<td>0.29276</td>
</tr>
<tr>
<td>Speech Therapy</td>
<td>0.67474</td>
<td>0.45528</td>
<td>0.01153</td>
<td>0.13829</td>
<td>0.22658</td>
</tr>
<tr>
<td>Special Education</td>
<td>0.68401</td>
<td>0.46787</td>
<td>0.01259</td>
<td>0.10548</td>
<td>-0.21619</td>
</tr>
<tr>
<td>Gerontology</td>
<td>0.68714</td>
<td>0.47216</td>
<td>0.00429</td>
<td>-0.11503</td>
<td>0.03905</td>
</tr>
<tr>
<td>University Clinic</td>
<td>0.68883</td>
<td>0.47448</td>
<td>0.00232</td>
<td>-0.37116</td>
<td>0.15926</td>
</tr>
<tr>
<td>University Hospital</td>
<td>0.69322</td>
<td>0.48056</td>
<td>0.00607</td>
<td>-0.10222</td>
<td>-0.11936</td>
</tr>
</tbody>
</table>
The selection of seven professional educational programs was determined arbitrarily with a view that some might be more of a graduate nature and characteristically located in large university centers, i.e., medicine, social work, clinical psychology, while others would be of an undergraduate nature like nursing and perhaps be located in small liberal arts institutions.

The cost of interprofessional learning has been determined to be high. Most programs involve a high faculty-student ratio, and are therefore probably expensive.

It has been hypothesized that the large schools would be more likely than the small schools to be able to afford much "luxuries," and to have facilities and services necessary for the development of fundable or experimental projects.

It was further hypothesized that the availability of university clinics and university hospitals for clinical learning would foster interprofessional learning activities.

**Analytical Method**

Multiple regression statistic was used to analyze the data. Multiple regression is a general statistical technique through which one can analyze the relationship between a dependent or criterion variable, in this case the presence of interprofessional learning, and a set of independent or predictor variables, in this case the eleven potentially influencing factors such as the presence of a school of medicine.

There were some difficulties encountered because some of the factors were ordinal, such as enrollment, and some were nominal, such as whether the school was public or private, however, with translation of "Yes" and
"No" into an ordinal factor the statistic could be used.

To interpret the table the following definitions may be helpful.

R. Square. A measure of prediction accuracy. It is the ratio of explained variation in the dependent variable to the total variation in X.

RSQ Change. The difference in the prediction accuracy when the next variable is added to the multiple regression.

Beta. The Beta's are the calculated standardized coefficients given to the independent variables in the regression equation.

Multiple R. A partial correlation gives the contribution of a particular independent variable while controlling for the influence of the other independent variables.

Single R. Gives strength and direction of association of dependent and independent variables.

Findings

Using the multiple regression statistical measurement for these eleven variables, the three most influential factors were therefore: 1) the presence of a program in medicine, 2) the presence of a program preparing for physicians assistants or associates, and 3) enrollment in the school of nursing (not total university or college enrollment). Those schools with larger numbers of nursing students were more likely than those with smaller numbers to have interprofessional activities. This result was compatible with this researcher's expectation, however, the expected influence of overall size of the institution was not as high as anticipated and fell to number six on the list.

At the same time the influence of the existence of a university hospital and/or university clinic associated with the school held the
lowest rank among the variables.

While we might assume that students of several professions utilize these sites as learning centers they are evidently not learning there together in any significant formal way. As noted by some observers the traditional clinic is not conducive to interprofessionalism.

In this analysis, however, only 48 percent of the change in dependent variable can be explained by these eleven variables. Nineteen percent can be explained by the presence of a School of Medicine, 8 percent of the change by the presence of a program for physician's associate and 8 percent by enrollment in the School of Nursing. As the other factors are entered into the regression only 4 percent change occur with the entry of Clinical Psychology and minimal change by the entry of the next four.

Summary

This chapter has provided a presentation and analyses of the data collected through the research methods described in Chapter II.

Two hundred and one nurse educators in forty-six National League for Nursing accredited baccalaureate programs responded to the survey relating to factors which promote and inhibit interprofessional learning. In this chapter descriptions of participating schools, of interprofessional learning opportunities, and of respondents have been given.

The perceptions of the participating nurse educators relating to selected factors which might promote and which might inhibit interprofessional learning have been identified for the entire sample. These perceptions have then been identified according to whether the nurse educators were representing schools with current interprofessional learning or schools without such opportunities. Sixteen factors rela-
ting to administration, faculty, students, curriculum development and implementation or resources and facilities, were strongly identified as primarily promoting interprofessional learning while one factor was primarily identified as inhibiting such activities by the entire sample. There was little difference in perceptions of promoting and inhibiting factors between the two groups of nurse educators, those representing schools with and those representing schools without current interprofessional learning.

The primarily promoting factors related to philosophy, purposes and objectives of the institutions, to philosophy, objectives and structure of the nursing curriculum although the structure was less likely to be identified. In addition, factors promoting identified related to interest of nursing faculty, to ability and willingness to accept leadership, to educational preparation and attitudes of nursing faculty towards other professions. The willingness to accept leadership and educational preparation was less likely to be viewed as promoting by faculty in schools not currently offering interprofessional learning. Educational preparation, personality characteristics, attitude and special interest of nursing students were all viewed as promoting factors, as were audiovisual services and cooperation of personnel in clinical facilities.

For the entire sample, and for those representing schools with current interprofessional learning the major inhibiting factor identified was related to available time for interprofessional activities. In addition faculty representing schools without current interprofessional learning identified funding available for experimental programs as an addition inhibiting factor.

Nurse educators participating in the research study were also asked to relate to interprofessional learning activities in terms of their
level of agreement or disagreement with expressed statements.

As a result of these responses a profile of attitudes and opinions relating to interprofessionalism has been developed. It was highly supportive of interprofessional activities.

This chapter has also included an analysis of several variables which have been considered influential in the development of interprofessional teaching and learning activities. These were related to size of the institution, professional educational programs, and sites utilized for clinical learning. The most influential factor in development of interprofessional activities for baccalaureate nursing programs identified by this sample was the presence of a school of medicine on the same campus.

Chapter V will summarize the study, discuss implications and make recommendations for future study.
CHAPTER V

INTERPRETATION OF THE STUDY

This study was designed to explore and describe multiple factors relating to interprofessional learning for baccalaureate nursing students.

In response to multiple social and political forces towards an improved national system of health care, which incorporates interprofessional collaboration by a health care team, advocates have emerged for interprofessional educational programs to prepare for such activities. Despite the messages of leading practitioners, political and social scientists, educators and significant others, few programs have been institutionalized and no clear guidelines have been developed out of the maze that is American health professional education. Most schools still appear to prefer to go their own way and this has been demonstrated by this research study.

A review of the literature was conducted to study the concept of interprofessional collaboration, and included concepts of profession, professionalism and professionalization. The concept of collaboration related to problem solving techniques as health professionals work together for common goals. One main theme appeared to run through the thoughts of the various authors. Almost unanimously those writing about the professions, such as Goode and Moore, note the definition of profession itself to imply autonomous practice. The professions have a culture which includes deeply ingrained individualism, and during the process of professionalization it is only at the final process, after a great deal of conflict that interprofessional collaboration takes place.
Another major theme addressed by Etzioni, Leininger and others, writing specifically about the health professions, related to the levels of professions, in other words, the hierarchy which exists where stratification places medicine at the top and others below. This castelike arrangement breeds a further degree of isolation and leads to condescension towards occupations at the lower levels. The number of years of higher education required for admission to a profession determines the level of professionalism. Although the number of years for most professions is clear and uniform, admission to the nursing profession may range from two to five or even more years. It is, therefore, not surprising that other professions and the public are confused about where nursing falls. Clearly identified, therefore, were three major factors which Jacobson described as inhibiting interprofessionalism: culture differences, social structure and status, and role ambiguity with incongruent expectations. Throughout the reading, a variety of factors were identified which seemed to influence whether or not interprofessional teaching, learning and practice activities occurred and how effective they became. These tended to fall within the categories of administrative support, curriculum objectives and design, faculty philosophy, preparation, and willingness, student preparation and interest as well as resources.

A preliminary exploratory study of two hundred and forty-six National League for Nursing accredited baccalaureate nursing programs was conducted in 1975 to learn the status of interprofessional learning opportunities for baccalaureate nursing students. Of the one hundred and fifty-five schools which responded (representing 63 percent response rate), 57 or 37 percent stated that they did currently have such programs. The majority of programs therefore clearly offered no current
opportunities for interprofessional learning, however this did not mean that there was no interest in the concept. A good number of respondents indicated that they were planning activities or considering such planning in the near future. Of course we do not really know if these figures can be generalized to all baccalaureate programs. It may very well be that the 155 respondents answering the questionnaire were particularly interested in the research question.

In any event the response to the preliminary survey certainly acknowledged that interprofessional teaching and learning were in fact occurring on campuses both large and small, public and private, all across the country. A few core programs and a long list of interprofessional courses were identified including courses offered as elective or required of nursing students with a variety of other students, from medicine, to theology, to law enforcement. For the most part these courses were of a didactic nature but a few clinical courses were also identified.

The most commonly offered interdisciplinary course was identified as "human sexuality" and this seems understandable. Certainly in the one area which must place a premium on communication among the sexes the need for a mixed group of students requires inclusion of nursing students who are primarily female with the other professional and technology students who are primarily male. In recent years the subject of sexuality has increasingly received attention from the general public. At the same time there has been recognition that the ill and the handicapped also have sexual needs and concerns which may benefit from guidance and support provided by health professionals. The great need for this knowledge to be included in the health curricula has placed heavy responsibility upon the faculty, where few traditionally prepared
educators have expertise in the theory of sexuality or sexual counseling. It not only makes great economic sense to provide an interdisciplinary course in this area but understandably the objectives can certainly be met more effectively and more efficiently for all students with this strategy.

The preliminary study, which helped to refine the research question and select the sample population, also indicated that a substantial number of interprofessional courses which had been developed in the past had not been sustained. The reasons offered for discontinuation were primarily related to lack of interest, time, loss of outside funding and interprofessional disagreement over objectives. Obviously the question of why programs were started, why some were continued and why others were not is a complex one.

The research study itself, was designed therefore to identify those factors perceived by nurse educators as promoting and inhibiting interprofessional learning and perhaps to determine whether there were differences in perceptions based upon current employment in an institution where interprofessional activities were taking place. Prior to looking at these perceptions it seemed appropriate to look at the various programs themselves. Characteristically the school in this study with interprofessional activities would tend to be a public institution located in the midwest or the south, and have a total student enrollment of 10-25,000 students. It would enroll from 200-400 students in the nursing program, require two years of college or admit students with a high school diploma, provide a curriculum of two years of nursing after two years of general education, or a four year integrated curriculum.

This is not necessarily the typical school of nursing when compared to all National League for Nursing accredited baccalaureate programs
which represent a majority of the B.A. schools in the United States. In fall 1975 there were 329 Baccalaureate Nursing programs in the United States. Two hundred fifty-four were accredited and seventy-five were not accredited by The National League for Nursing. Here the schools are almost equally divided between public and private, a greater percentage are located in the midwest, and a majority require only high school graduation. The schools without interprofessional learning were more nearly like the typical National League for Nursing accredited programs.

Although this was a volunteer sample, and no generalizations to the total population could validly be made, there did seem to this observer to be some rationale behind these findings.

Why in public institutions? The reasons seem logical. The public institutions may have a greater obligation to educate for the more generalized social needs of the state rather than local community. Sometimes these large state universities are funded for special projects or at least encouraged to secure research funds for innovative programs.

The size of the school of nursing is probably just right—not too large to be unwieldy to manage and not too small to be "not worth the effort." The south, with its less industrialized economy and lower income per capita has not provided the lucrative rewards to the medical profession which the east and west have provided. Physicians have less often chosen therefore to settle outside the large southern cities where much of the poor populations reside. In attempting to provide health care to this population, the large southern universities have developed alternate methods of health care delivery primarily utilizing the "health care team," often with federal or outside private funding. They have developed educational programs to prepare students for collaborative practice.
Another characteristic of many schools with interprofessional learning which occurred more often than in schools without such activities was the requirement of two years of general education prior to admission. This does seem to make sense if we consider that a curriculum philosophy which incorporates interprofessional activities (usually with students at the graduate level such as medicine) would more than likely look for a more mature student for such participation. It has been suggested by some nurse educators that interprofessional education for nursing should take place at the graduate level. Since this may be unrealistic for nursing where most professional education is at the baccalaureate level, at least the nurses in the upper division of the nursing major are closer in age and educational level to the graduate students with whom they collaborate. Upper division students may be considered closer to the professional status of the other professions on the scale of professionalism and this may influence the chances for success of any interprofessional program. Perhaps this is the ideal type of curriculum for schools interested in developing interprofessional activities. There are however many upper division nursing programs on campus with other health professions where interprofessional work has not been established. Other factors must be at work.

Although it seemed important to look at the selection of clinical sites for practice learning as possibly influencing interprofessional learning it was difficult to interpret the findings. Perhaps it did seem that "out of hospital" facilities were utilized by schools with interprofessional learning more often than "in hospital" facilities. This is understandable since the whole bureaucratic system of the hospital places the responsibility for the patient in the hands of the physician. Whether there was a true difference among types of programs
was really not appropriate to determine, since this is a flexible commodity, and if it was really identified no assumptions related to interprofessional activities in those agencies could be made. There is no guarantee that interprofessional collaboration occurs even when professionals are employed in the same institution caring for the same clients.

This study identified twenty-five other health profession or occupation curricula which reside on the same campuses with baccalaureate nursing programs. It would seem that the presence of two or more health curricula under the same administration should promote interprofessional learning activities. There was a much greater incidence of other health professional curricula on the campuses of schools with current interprofessional learning than on campuses of schools without such opportunity. The most prevalent were medicine, pharmacy, dental medicine, social work, veterinary medicine and therapies such as occupational, physical and respiratory therapy. The former group of schools also had a few programs with potential for collaboration which were not present at all on the campuses of the latter i.e. physicians assistant, dental hygienist and podiatric medicine.

It would appear therefore that schools with interprofessional opportunities were collaborating with a variety of other schools, although medicine was by far represented most in interprofessional courses with nursing. The presence of a school of medicine was identified as the most influencing factor in promoting interprofessional learning. Is there an ideal setting for professional nursing education? Is the university medical center the best place for nursing? Are liberal arts colleges the place for professional nursing?

Perhaps the larger public institutions, which have many health curricula are the best place for nursing to dwell if interprofessional
learning activities are a major objective. The small liberal arts
college with nursing the only health profession might not be the best
place for educating professional nurses for the objectives of interprofes-

sionalism. (Some nurse educators have expressed the need to leave inter-
professional learning to graduate nursing education, and place greater
emphasis upon development of a strong professional ego during the bac-
calaureate program. In view of nursing's long battle for professionalism
and its implicit autonomy, the fear of suppression in collaborative
activities is a real one.)

Can the processes for interprofessional collaboration be taught to
nursing students only with medical students? A third of the nursing
programs without interprofessional collaboration shared college or
university facilities with programs in nutrition, health care administra-
tion and clinical psychology and almost half with programs of health
education, as well as others at the baccalaureate level such as gerontol-
yogy. Do these programs all have problem solving responsibilities of
mutual concern with nursing? Perhaps at least these professionals might
have less bias against each other if they worked together as students,
while at best they could possibly develop effective processes for team
work which they could use with a variety of professionals and which
would be of benefit throughout their professional lives.

A description of the model of interprofessional programs sited in
this study would be a single course, one or two offered as electives
for senior students. It would probably be related to the social sciences
or humanities and most likely be "Human Sexuality," with nursing students
sharing the classroom with medical students in a course taught by a part
time specialist in the department of psychiatry from the school of
medicine who volunteered to teach for an hourly rate. Perhaps a maternal
child health or mental health nursing faculty member, also participated voluntarily, however without pay. The films and other audiovisual aids would be provided by the university media services division, and the individual faculty member or the curriculum committee of the department of psychiatry outlined the learning objectives, content and strategy which the nursing people possibly had opportunity to review prior to the course establishment.

The actual descriptive data related to interprofessional learning programs conducted by participants in this study was rather limited, however, it seemed to concur with much of the findings in the literature and this researcher's own experiences in most of our interprofessional courses. Unfortunately no clinically based course was described in any depth in the study, while courses of this type have been described in various journal articles and funded project descriptions.

Although respondents identified a few cases of implementation of clinical courses for nursing, medicine and other professions, no specifics were included. This would probably have required a different type of questionnaire and perhaps site visit with interview and direct observation. For the most part these courses were related to health assessment procedures in community health.

The question of true communication always arises in relation to classroom sessions of a lecture style for students of different professions. How much interprofessional collaboration really occurs? It has been demonstrated that unless there is an interprofessional faculty at the front of the room and they openly communicate, little else interprofessional occurs.

A look at past experience with interprofessional learning and a review of twenty-four courses which were previously offered but were
continued, permit speculation of what happened and why. Perhaps it is here where the concept of professionalism with its inherent culture of autonomous practice and individualism was evidently interfering with the projected plans for interprofessional teaching and learning. Factors related to interprofessional faculty interest and relationship, disagreement about interprofessional objectives and philosophical incompatibility, and inadequate faculty "time" were three major causes among the complex reasons given behind discontinuation of interprofessional teaching and learning. Given the isolated status of professional education and the preparation of professional educators today it is no small wonder.

It has been noted that faculty need preparation for interprofessional teaching and although the models in one paper were based primarily on nursing, the implication for educators of the other health professions is quite clear. Few educators have been taught interprofessionally, few have been taught how to teach interprofessionally and few expect to teach interprofessionally. It is a lot easier to maintain professional identity, to work with one's own professional peers, and to relate to one's own students. It certainly does take time for planning, meetings, evaluation studies, and scheduling. One respondent indicated it was particularly hard to plan with and schedule anything for medicine and nursing. And why were many of the discontinued programs evaluated poorly by students and faculty? It is possible that medical and nursing students as well as faculty bring to the setting some preconceived notions about the professions they are aspiring to enter which interfere with their ability to participate in a collaborative experience. No doubt the little satisfaction derived was just not worth the time and effort.
Yet when nurse educators of all programs were asked to evaluate the effect of interprofessional collaboration upon their students as well as upon their own professional lives they were highly positive in their response. Clearly 90 percent of educators in all schools selected "stimulating and challenging," "highly rewarding" or "worthwhile" to define the effect upon faculty and students with almost half selecting "stimulating and challenging." There was however less identification of interprofessional activities as "highly rewarding" for faculty by nurse educators currently involved in schools with interprofessional learning. For those who were actually involved at the time of the study, the benefits may not have seemed so rewarding just yet. Why did the others not currently involved select "highly rewarding" so often? This could be a difference between what one desires or remembers and what one actually experiences as "reality."

It may be that the time spent in interprofessional activities has been short and therefore not enough data has been collected to make a positive statement. The same problems inherent in developing a new course alone may be apparent when collaborating on a course.

Before we look specifically at those factors which are perceived to promote and inhibit interprofessional learning it is important to describe the philosophical approach held by the participants in the study related to interprofessionalism. For the most part participants in the study acknowledged the value of interprofessional collaboration and expressed agreement with collaborative educational programs. They almost unanimously agreed that students of the health care professions should be educated together and that optimal health care is best provided to the consumer by interprofessional teams. In addition they all expressed the belief that students need to learn together from the
outset, although there was a tendency to recognize that students would benefit by increased role sophistication before being exposed to interprofessional activities. This is certainly a difficult judgment to make and a dilemma for those planning such programs.

There was almost unanimous agreement that health professional curricula would be enriched by interprofessional activities and therefore curricula should be modified to permit students to work together in teams. The differences in the expressed views of the two groups of respondents were more of the level of agreement/disagreement rather than between agreement and disagreement.

These views were held by almost all participants and yet no interprofessional activities were identified on twenty of the forty-six campuses. Obviously that level of agreement/disagreement may be significant enough to influence their activities toward interprofessional teaching and learning, or the inhibiting factors on some campuses are just impossible to breach.

There was also a significant difference among respondents related to the concept that interprofessional collaborative education belongs at the graduate level. The respondents from schools with current programs disagreed more strongly with this concept and demonstrated this disagreement through their interprofessional activities with baccalaureate students. Perhaps the faculty in schools without interprofessional activities were rationalizing their lack of participation in these activities, or perhaps they recognized the multiple difficulties implicit when one group of students is at the graduate level and one group is at the undergraduate level.

Another area of significant difference relating to philosophy but focusing on economics involved the financial support necessary for
interprofessional work. Most respondents from schools with interprofessional programs did not believe the expenses involved were prohibitive, and most of the other group expressed themselves similarly, however a larger proportion of those in schools without interprofessional activities were uncertain of this inhibiting factor. They also were to a large extent unwilling to commit themselves on whether outside funding or proximity of other programs would increase their chances of developing interprofessional activities. This of course only substantiates that their commitment to interprofessional learning is definitely not as great as the commitment expressed through action by other nurse educators. The problem might be the difference between "curriculum" and "elective" as something seen above and beyond the usual.

Yet another philosophical area which may or may not interfere with collaborative efforts relates to a basic conflict within the nursing profession mentioned briefly before. Although a significant difference among groups was not identified through Chi square statistic it seems appropriate to recognize that a majority of respondents from schools without interprofessional learning and almost half of respondents from schools with interprofessional activities agreed that the nursing professions should clarify its functions before it attempts to develop interprofessional opportunities. The confusion between roles and functions of diploma, associate degree and baccalaureate graduates is not only an inhibiting factor where interprofessional activities are concerned, it is a major problem which the profession must attempt to alleviate as soon as possible. This is also felt in the education programs in terms of what the essential content should be.

How do faculty perceive themselves in relation to interprofessional teaching? Most baccalaureate educators in this study expressed the
belief that they were qualified to teach students of the other health professions, yet only half indicated that the educational preparation of nurse faculty was a primarily promoting factor. If the educational preparation is inadequate then what other factors make the nursing faculty so confident of their ability to teach others? Perhaps it is their clinical practice expertise. It would seem most appropriate to point to their experience caring directly for patients which provides insight into emotional needs of ill patients, provides a total patient or family perspective, or at least ensures technical skills which other health professional students need as much as nursing, i.e., suctioning, administration of medications and aseptic procedures. But the courses they were teaching were didactic, so how did that relate to clinical skills? Perhaps it was their ability to apply the knowledge which is the key to their self confidence.

Whatever their perceptions about their special abilities for interprofessional teaching the participants in this study strongly indicated that before nursing and other health profession students can learn to work collaboratively with each other, faculty from each discipline must first learn to work together. This is an important directive for administrators and educators contemplating development of interprofessional learning opportunities. Faculty have needs when it comes to all teaching and planning, but special needs for planning interprofessional teaching which administrators must recognize. Administrators must be cognizant of the climate they foster, of how they administer--colleagueally or bureaucratically, and of the physical separation of professional groups on the campus or university setting.

Experience has shown that at least three months of planning together by faculty was essential before mutual objectives were clarified and
positive working relationships were established. It was essential that
every faculty participant really believe in the purposes of interprofes-
sionalism and be willing to exert the energies. The nurse faculty
particularly needed to have in addition to self confidence, a strong
professional ego, and a good sense of humor. Sensitivity to the nuance
of sexism is also helpful.

What of the concept of professional autonomy identified by Shein
as a strong factor inhibiting interprofessionalism? Only one-third of
respondents in this study identified this as an inhibiting factor with
no significant difference among the two groups of respondents. In fact
almost half viewed this as a promoting factor. Although seemingly par-
adoxical there does seem to be a way to explain this outcome. This
study involved faculty perceptions related to interprofessional teaching
and learning opportunities, not to interprofessional practice although
a degree of role blurring occurs. The nurse educators in this study
apparently regarded themselves as qualified professional practitioners
and teachers, self-confident and strong in their professional ego. In
view of this high self concept no wonder they feel their qualifications
contribute towards interprofessional activities. They apparently want
to relate interprofessionally, and express confidence that their atti-
ues toward other professions are primarily promoting of such activ-
ities, although they recognize that unfortunately the attitudes of other
professionals toward nursing are not very supportive. (No small wonder
given the confusion about professional nursing and what it means outside
the profession as well as within the profession.)

Another view commonly expressed in nursing literature in relation
to professional autonomy and educational practices was not upheld in
this study. It related to the involvement of other health professionals
in the education of students of nursing. Participants did not seem particularly concerned about loss of control of the educational product once other health professions were involved in education of nursing students. One can only assume that the words involvement versus control were critical, and the nurse educators today in baccalaureate programs feel confident in their ability to maintain control of their products.

Nurse educators have fought bitterly to take nurse "training" out of the hospital where it was dominated by medicine and patient care responsibilities to the college where they could control the educational objectives and provide a liberal education for its perspective professional practitioners. It was thought that they would fear loss of this professional right. Recently the struggle for independence and self control has focused upon the development of the nurse practitioner in the delivery of primary health care. Nursing and medicine have disagreed bitterly about this role as a "physician extender" and the terms being used. The physicians want to maintain the words "supervision by physicians" attached legally to the expanded function of nurse practitioners. For the most part nurses will not accept this, and maintain that they are independent practitioners, preferring to use the terms "consult" and "collaborate."

The two main factors perceived by nurse educators as inhibiting interprofessional learning were "time" and "money." It was acknowledged that although the philosophy, purposes and objectives of the institution idealized collaboration, isolation was practiced. It may very well have been because administrative financial support was inadequate. Interestingly enough respondents from schools with interprofessional learning were more adamant about their institution "speaking collaboration but practicing isolation" than their peers in schools without such activities, although
they agree that their institutions were willing to experiment with new and innovative programs.

There is no doubt that interprofessional activities take time and cost money. Nurse educators have not for the most part been relieved of other responsibilities when they elect to participate in interprofessional activities, nor have they been paid extra. Administrators may be overly concerned with educational productivity and accountability in terms of hours of student contact, yet little incentive may be provided for interprofessional activities which require overload of credits as well as time. Herein lies an important concept to be considered. Whose responsibility is it to pay for interprofessional programs? If a national health delivery system is on the horizon, and health care delivered by interprofessional teams is mandated, should not the educational costs be assumed by the federal government? It seems quite clear that someone outside the individual schools must assume this responsibility or the majority of schools, financially unable to provide these programs, will continue to exist without them. The political ramifications are obvious. Only the schools able to support these mandated programs will be able to continue their nursing curricula with interprofessional learning experiences unless the federal government plays a greater role than it has to date.

Although the "time" factor was strongly identified by both groups of participants, there was a significant difference among groups in response to the statement that "nursing faculty have more than enough responsibility teaching nursing." The differences again involved levels of agreement/disagreement and a much greater "not certain" response expressed by faculty in schools without current interprofessional learning.
Do nursing faculty have more than enough responsibility teaching nursing? Faculty in nursing seem overwhelmed by the two hours of classroom teaching per week, the demands of clinical teaching and evaluation procedures and the meetings. Yet in this study 71 percent of nurse educators involved in interprofessional teaching did not perceive that nursing faculty have more than enough responsibility teaching nursing. Perhaps they perceive interprofessional involvement as teaching nursing and have not separated the two. It may be that the faculty was heavily involved in advanced or continuing education and felt that interprofessional collaborative teaching facilitated achievements of their own educational objectives.

What of the characteristics of baccalaureate nursing students? Are they prepared for interprofessional activities? The nurse faculty participating in this study perceives their students to be prepared. They considered the educational preparation, personality characteristics, special interests and attitudes of nurse students to all be promoting factors. There was, however, a significant difference among groups of respondents regarding the attitudes of nursing students toward collaboration and the attitude of other students toward nursing.

In the former case the difference seemed to lie in the strength of perception of this as a promoting factor as expressed by faculty in schools with interprofessional activities. Faculty in schools without interprofessional activities expressed their lack of knowledge of the attitudes of other students more often, but there was also an interesting split among participants within groups.

When you ask nursing students who have been involved in interprofessional activities what the attitude was of other students toward them you also hear a divided response, and few generalizations can be made.
It has been said that first and second year medical students are not interested in interprofessional learning, but the dental students are naive, open and willing to learn. When it comes to physician assistant students some hostility is often present and a sense of arrogance towards nursing has been expressed in the classroom.

In the classroom the differences may show up between undergraduate and graduate students whereas in the clinical setting the differences may not be so apparent in the beginning because they are all novices.

At present our baccalaureate nursing programs have so many objectives it seems easy to omit any reference to interprofessional learning and wiser still. There seems to be enough to fit into the curriculum; nursing process, pathophysiology, communication skills, technical skills, community assessment, patient advocacy, and political action to name a few, without adding the very difficult to plan and implement interprofessional activities. It appears to be a question of the base plus application interfering with the establishment of objectives for collaboration. Perhaps this is another reason why so many faculties in schools without interprofessional activities were uncertain about whether or not interprofessional learning belongs at the graduate level rather than the undergraduate level.

The response of nurse educators in this study to the question of what factors they perceived promoted and inhibited interprofessional learning demonstrated the diverse perceptions of nurse educators across the country and apparently reflected the commitment the two groups of educators have to interprofessional activities.

Unfortunately it does not necessary imply that interprofessional activities guarantee professional satisfaction. More faculty in schools without interprofessional activities indicated they would rather work
in their institutions than elsewhere.

Perhaps if we knew more about the other factors on the campus relating to job satisfaction and professional as well as personal fulfillment we might make some profound statement about the effects of interprofessional teaching on a teachers role satisfaction. It is possible that where there is interprofessional teaching there are pressures towards other types of innovative programs, towards greater educational achievement, towards publishing and toward research. The competition is often keen and the "politics" may be heavy. Although stimulating and challenging, this type of atmosphere is often disturbing to live in and many "nurse type" individuals do not thrive well.

Another interpretation might be however that the type of nurse educator who does thrive in this atmosphere is more adventurous and more willing to look for bigger and better things elsewhere. Also the difference may be in expectations of faculty in universities with emphasis on publishing, research and getting grant funds as opposed to the liberal arts colleges where the emphasis may be on teaching instead.

Participants in this research study did not perceive that nursing students were in a less equal position on a student health team. Unfortunately it is here that sexism may really flourish, because being aggressive, assertive, and dominant are characterized as non-feminine attributes and seeking power is still viewed as a masculine quality not appropriate for women. Images of nursing and of medicine, particularly in the media, support a submissive role for women and a dominant one for men. The influence of the women's movement has yet to make an impact on nursing.

Although the majority of participants in this study appeared to perceive that the nursing curriculum, philosophy, and objectives were
strongly promotive of interprofessional activities, they appeared to rec-
ognize that the structure and flexibility were not necessarily so.

There was a significant difference found among groups relating to
the objectives of the nursing curriculum, where a greater percentage of
respondents from schools without interprofessional learning recognized
the objectives as an inhibiting factor and not a promoting one. This
appears to be a natural finding which helps to explain why these schools
have chosen not to participate in the development of interprofessional
learning programs, and yet who is responsible when the faculty writes
the objectives? If the faculty writes the objectives are they subcon-
sciously impeding themselves? Is this where their true feelings show up?

Although nurse leaders across the country are emphasizing the need
to seek recognition of nursing as an autonomous profession and nurses
as independent practitioners, nurse educators in this research study
did not view this as contradictory to a philosophy which speaks of
interprofessional collaboration.

Perhaps the key to promotion of this philosophy and establishment
of programs falls within the rationale given to explain why "human
sexuality" is the most commonly offered interprofessional course. When
objectives for learning can be more effectively met by students of dif-
ferent professions learning together and the principles of cost effec-
tiveness and time efficiency are able to be applied, the mutual benefits
derived from interprofessional learning can be recognized more easily.

In view of the many difficulties encountered by educators in
introducing and establishing interprofessional learning it may very
well be that energies placed upon collaborative clinical practice may be
more fruitful than those placed on education.
Recommendation for Further Study

It is quite clear that the advocates for educational programs which include collaborative activities have put together a case which certainly needs more attention from educators in the various health professions.

Although the literature search identified multiple factors which evidently inhibited efforts toward interprofessionalism, especially professionalism, and uncovered problems with interprofessional activities neither the research findings nor the literature specifically identified why our attempts at collaborative education are not working.

This major question is certainly related to the values perceived of interprofessional education by those responsible for implementation of professional education.

What are the real benefits and for whom? We really have no clear data to support the hypothesis that the "health team" delivers better care to consumers, although both consumers and providers may express a degree of satisfaction with this method. We also have no clear data to indicate that students of the health professions become more effective practitioners when they learn their professions with other students.

The nurse educators in this study expressed the perception that they and their students benefited from interprofessional teaching and learning opportunities, but exactly how and to what purpose was not identified. How that perceived benefit to the nursing profession related to those in the other professions or to the consumer was not requested and therefore not offered.

Why should the other health professions share learning experiences with nursing? What does medicine in particular have to gain? Its
contribution to the health status of Americans is universally recognized. These questions will need to be answered before a mandate for interprofessional education for health care practice can occur.

This was a small study of a large problem and undoubtedly a great deal of further study is indicated to thoroughly evaluate the situation of interprofessional learning activity for health care education in this country, as well as interprofessional health care practice.

In addition to the obvious need for more objective evaluation of health care delivery by interprofessional teams, this study needs to be replicated for faculty, students and administration, perhaps with comparisons of perceptions made among those on some campuses. It needs to be replicated for those in the other health professions as well, with comparisons made among the professions.

I would also recommend that an official study be undertaken by a governmental group or the national accrediting agency, which might demonstrate more clearly state, regional, and national findings. Hopefully a greater degree of response would be accomplished which could lend itself to more specificity and greater opportunity for generalization. In addition I would recommend that programs be evaluated through long term on site observations and interview. These reports and evaluations should be published and made readily available to administrators and faculty in all schools across the country which could provide helpful information which may prevent costly errors. Especially important is a study of costs involved. Without specific data, relating to the financial needs of interprofessional programs, decisions cannot or should not be made to implement them. Following this is the question of who should pay, the federal government or individual schools and states.

Study of perceptions of those in the liberal arts as well as the
other professions such as law and theology relating to factors promoting or inhibiting interprofessional learning would be interesting to review and compare to the findings in this study.

Another area which is important to study related to the student population for interprofessional learning. What level of student is most appropriate? Perhaps interprofessional learning would be implemented from day one or perhaps it should really be left to the senior year, and then perhaps it should be left to graduate study. How do we prepare faculty for their role in interprofessional teaching? I know of no studies involving faculty characteristics and attributes which point to their roles in interprofessional teaching. This should be a major area of concern before interprofessional programs are institutionalized.

In summary there are still many questions to be asked before interprofessional learning can become a fruitful component of baccalaureate nursing education.
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APPENDIX A

INTERPROFESSIONAL COLLABORATION
CONSENT FORM
Note to Participants:

Interprofessional collaboration, although widely advocated, has provided a serious challenge to educators for the Health Care Professions. As a certified doctoral student in the Department of Nursing Education, I am interested in finding out what factors you perceive as promoting or inhibiting the development and implementation of programs of interprofessional learning.

Your participation would require the completion of a questionnaire. Any responses you give will be treated as part of group data, and neither you nor your institution will be individually identified in the final report of the study. I will gladly share with you the results of the research upon completion.

Please indicate below your willingness to participate by signing this letter and returning it to me along with the completed questionnaire.

Thank you for your assistance.

Sylvia Kleiman Fields

I am willing to participate

Signed
APPENDIX B

PRELIMINARY QUESTIONNAIRE
1. Are nursing students in your baccalaureate degree program now having learning experiences at the professional level with students of other health professions i.e. Medicine, Social Work, Physical Therapy, Physicians Associate.

| Yes | No |
--- | --- |

If yes please indicate below. (Do not include basic natural science, social science or humanities courses)

<table>
<thead>
<tr>
<th>Title of Course</th>
<th>Classroom</th>
<th>Clinical</th>
<th>Elective</th>
<th>Required</th>
<th>Other Health Profession Included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Politics of</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Health Care,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human Sexuality</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Patient</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Are you or members of your nursing faculty involved in the planning for and teaching of any of these courses?

| Yes | No |
--- | --- |

If yes please indicate names and titles of as many faculty involved as possible.

<table>
<thead>
<tr>
<th>Title of Course</th>
<th>Name of Faculty Member</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Do you or your faculty plan to participate in the development and/or teaching of interprofessional courses in the future?

__ Yes  __ No

If yes in what areas? Please indicate.

________________________________________________________

________________________________________________________

4. Have you or your faculty been involved in the planning for and/or teaching of interprofessional courses during the past 5 years which are no longer being offered.

__ Yes  __ No

If yes please indicate briefly reasons for discontinuing the course?

________________________________________________________

________________________________________________________

________________________________________________________

________________________________________________________

5. Would you be willing to have your school participate in the indepth research study itself?

__ Yes  __ No

Name of School ______________________________________________

Address _______________________________________________________

Name and title of individual responding to questionnaire

________________________________________________________

Type of Program:

__ 4 year integrated  __ Upper division only

Enrollment:

__ Generic students  __ R.N. students
APPENDIX C

PRELIMINARY EXPLORATORY STUDY RESULTS
CONCEPT OF INTERPROFESSIONAL COLLABORATION

Results of Preliminary Survey

Fall, 1975
Sylvia K. Fields, R.N., M.Ed.

A preliminary questionnaire was sent to 246 NLN accredited Baccalaureate programs. One Hundred Fifty-five or 63% responded to the questionnaire.

1. Of the schools who responded:

- 57 stated that they currently had programs with interprofessional learning opportunities (36.7%).
- 96 stated that they did not (62%).
- 2 returned questionnaire unanswered (1%).

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
<th>NO</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total #</td>
<td>57</td>
<td>96</td>
<td>12</td>
</tr>
<tr>
<td>% Response</td>
<td>36.7%</td>
<td>62%</td>
<td>1%</td>
</tr>
</tbody>
</table>

2. Nursing faculty involvement in current opportunities offered.

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
<th>NO</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total #</td>
<td>50</td>
<td>98</td>
<td>7</td>
</tr>
<tr>
<td>% Response</td>
<td>32%</td>
<td>65%</td>
<td>3%</td>
</tr>
</tbody>
</table>

3. Were programs planned in the near future?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>UNCERTAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total #</td>
<td>82</td>
<td>58</td>
</tr>
<tr>
<td>% Response</td>
<td>52%</td>
<td>37%</td>
</tr>
</tbody>
</table>
4. Did they have programs in the past 5 years which were discontinued?

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total #</td>
<td>21</td>
<td>130</td>
<td>4</td>
</tr>
<tr>
<td>% Respond</td>
<td>13%</td>
<td>84%</td>
<td>2%</td>
</tr>
</tbody>
</table>

5. Would they participate in the study?

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
<th>UNCERTAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total #</td>
<td>52</td>
<td>96</td>
<td>7</td>
</tr>
<tr>
<td>% Respond</td>
<td>33%</td>
<td>61%</td>
<td>4%</td>
</tr>
</tbody>
</table>

**SUMMARY OF RESPONSES**

<table>
<thead>
<tr>
<th>Question #1</th>
<th>Question #2</th>
<th>Question #3</th>
<th>Question #4</th>
<th>Question #5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes: 57</td>
<td>Yes: 50</td>
<td>Yes: 62</td>
<td>Yes: 21</td>
<td>Yes: 52</td>
</tr>
<tr>
<td>No: 96</td>
<td>No: 96</td>
<td>No: 50</td>
<td>No: 130</td>
<td>No: 96</td>
</tr>
</tbody>
</table>

Willing to Participate in Study 52

Schools with Programs or Courses with Interprofessional Learning Opportunities 26

Schools without Programs or Courses with Interprofessional Learning Opportunities 26
CONCEPT OF INTERPROFESSIONAL COLLABORATION

Response to Preliminary Questionnaire

Identification of Course Titles Currently Offered

A. SOCIAL SCIENCES AND HUMANITIES

*Human Sexuality
   Human Behavior
   Human Awareness
   Human Relations and Health Profession
   Interviewing
   Health Care Team--Roles and Conflicts
   Sociology of Health and Illness
   Suicide
   Death and Dying
   Gerontology
   Doctor, Nurse, Patient Relationship
   Multidisciplinary Health Care

B. POLITICAL SCIENCE AND SYSTEMS

   Health Policy Issues
   Changing Social Values and Professions
   Health Care Professions
   Ethics in Health Care
   Organizations of Health Care
   National Health Issues
   Current Health Problems
   Management of Health Care Systems
   Anthropology of Health
   Medical Ethics
   Current Medical Issues
   Health Economics
   History of Medicine

C. CLINICAL COURSES

   Community Health
   Ambulatory Care
   Rural Community
   Primary Health Care
   Physical Diagnosis
   Emergency Care
   School Health--Clinical
   Rehabilitation

*Most commonly cited course with students at several health professions.
D. RESEARCH PROCESS IN HEALTH CARE

Biostatistics
Epidemiology
Biometrics
Research in Health
Statistics

E. PHYSIOPATHOLOGY

Pathophysiology
Applied Science
Physiology
Medical Behavioral Science
Pharmacology for Health Disciplines

F. GENERAL HEALTH TOPICS AND SPECIAL PROBLEMS

Introduction to Health
Health Education
Growth and Development
Special Education
Mental Retardation
Troubled Child
Alcoholism
Gerontology
School Health non-clinical
STUDENTS OF OTHER HEALTH PROFESSIONS CURRENTLY
HAVING LEARNING EXPERIENCES WITH
BACCALAUREATE NURSING STUDENTS

Results of Preliminary Survey

Pharmacy
Medicine
Dentistry
Osteopathic Medicine
Veterinary Medicine
Social Welfare
Physical Therapy
Occupational Therapy
Physicians Associate
Clinical Psychology
Nutrition—Home Economics
Respiratory Therapy
Podiatric Medicine
Community Health
Medical Technology
Radiological Technology
Health Care Administration
Theology
Law
Special Education
Medical Record Administration
Gerontology
Speech Therapy-Audiology
Law Enforcement
Public Health

Fall, 1975
APPENDIX D

LETTERS TO DEANS AND DIRECTORS
In response to my exploratory survey of NLN accredited baccalaureate nursing programs conducted in late summer and fall of 1975 regarding the concept of interprofessional collaboration you indicated willingness to participate in my proposed research study. I think you will be interested in the results of the initial survey which I am sharing with you.

As an outgrowth of the response in which an equal number of schools not currently providing opportunities for interprofessional learning as those currently providing such opportunities expressed interest in participation I have decided to expand the purpose of the initial proposal.

In addition to describing current programs with interprofessional learning opportunities I would like to attempt to identify factors which nurse educators perceive as promoting and inhibiting efforts towards interprofessional collaboration.

I am therefore asking that you complete the enclosed questionnaire, and randomly select at least three of your faculty members who would also be willing to participate.

Please ask them to return the questionnaire directly to me in the enclosed envelope.

I am certain that the enclosed preliminary findings will prove interesting and look forward to the continued sharing of my research with you.

Thank you again for your willingness to assist me.

Very truly yours,

Sylvia Kleiman Fields

Enc.
In response to my exploratory survey of NLN accredited baccalaureate nursing programs conducted in late summer and fall of 1975 regarding the concept of interprofessional collaboration you indicated willingness to participate in my proposed research study. I think you will be interested in the results of the initial survey which I am sharing with you.

As an outgrowth of the response in which an equal number of schools not currently providing opportunities for interprofessional learning as those currently providing such opportunities expressed interest in participation I have decided to expand the purposes of the initial proposal.

In addition to describing current programs with interprofessional learning opportunities I would like to attempt to identify factors which nurse educators perceive as promoting and inhibiting efforts towards interprofessional collaboration.

I am therefore asking that you complete the enclosed questionnaire. Under separate cover I am mailing directly appropriate parts of the questionnaire to those faculty you have already indicated as participating in interprofessional learning activities.

I would very much appreciate your assistance in randomly selecting at least three faculty members who are not currently participating in such activities, and if not previously identified three who are currently participating. I am therefore enclosing sufficient copies of the questionnaire with return envelopes for your distribution in hope that they will be willing to participate.

I am certain that the enclosed preliminary findings will prove interesting and look forward to the continued sharing of my research with you.

Thank you once again for your willingness to assist me.

Very truly yours,

Enc. Sylvia Kleiman Fields
APPENDIX E

CONSENT FORM

Dear Mrs. Fields:

I am willing to participate in your research study regarding interprofessional collaboration. I understand that my responses will be treated as a part of group data, and neither myself or my institution will be individually identified in the final report of the study.

Signed

Institution
APPENDIX F

QUESTIONNAIRE
INTERPROFESSIONAL COLLABORATION

QUESTIONNAIRE

Note to Participants:

Interprofessional collaboration, although widely advocated, has provided a serious challenge to educators for the Health Care Professions. As a certified doctoral student in the Department of Nursing Education, I am interested in finding out what factors you perceive as promoting or inhibiting the development and implementation of programs with interprofessional learning. Interprofessional learning experiences are defined for the study as "planned and directed didactic and/or clinical practice opportunities whereby students of two or more health professions share problem solving experiences of interest to practice in each profession."

Your participation would require the completion of a questionnaire. Any responses you give will be treated as part of group data, and neither you nor your institution will be individually identified in the final report of the study. Code numbers are only used to verify response of participants for follow-up communication. I will gladly share with you the results of the research upon completion.

Please indicate your willingness to participate by signing the enclosed post card and mailing it at the same time as you mail the completed questionnaire.

Thank you for your assistance.

Sylvia Kleiman Fields
1. Organization of Nursing Program

1 ___ College of Nursing
2 ___ School of Nursing
3 ___ Department of Nursing
4 ___ Division of Nursing
5 ___ Other (Please specify) _____________________

2. Total Nursing Enrollment - Students registered as nursing majors ___ (Use your best estimate if exact numbers are not known).

3. Nursing Enrollment by types of students

A. Generic ___ (Use your best estimate if exact figures are not known).

B. RN ___ (Use your best estimate if exact figures are not known).

4. Minimum requirements for admission to Nursing major

1 ___ H.S. graduate
2 ___ 1 year college
3 ___ 2 years college
4 ___ 4 years college
5 ___ RN
6 ___ A.A. degree
7 ___ Other (Please specify) ____________________

5. Type of Program

1 ___ 4 years integrated
2 ___ 2 and 3 years
3 ___ 2 and 2 years
4 ___ 1 and 3 years
5 ___ Other (Please specify) ____________________

6. Usual Length of Program

1 ___ Quarters
2 ___ Semesters
3 ___ Trimester
4 ___ Summer Session

7. Number of full-time nursing faculty ___

8. Number of part-time nursing faculty ___
13. Other Health Professions under same educational administration (minimum degree BA - BS) (Continued)

- Medical Technology 61
- Radiological Technology 62
- Health Care Administration 63
- Theology 64
- Law 65
- Special Education 66
- Medical Record Administration 67
- Gerontology 68
- Speech Therapy-Audiology 69
- Law Enforcement 70
- Public Health 71
- Veterinary Medicine 72
- Other (Please specify) _____________________________ 73

14. Location of School

1. North East
2. South
3. Central
4. West

15. Administrative Support

1. Public
2. Private Religious-Affiliate
3. Private Non-religious Affiliate
4. Other (Please specify) _____________________________
BIOGRAPHICAL DATA OF INDIVIDUAL
RESPONDING QUESTIONNAIRE

1. Present Position

A. Please check (✓) your current title in the School of Nursing

1 ___ Dean
2 ___ Assistant or Associate Dean
3 ___ Chairman of Department
4 ___ Professor
5 ___ Associate Professor
6 ___ Assistant Professor
7 ___ Instructor
8 ___ Other (Please specify) ____________________

B. What is your current major area of teaching responsibility?

1 ___ Foundations of Nursing
2 ___ Medical Surgical
3 ___ Maternal-Child Health
4 ___ Psychiatric or Mental Health
5 ___ Public Health or Community
6 ___ Continuing Education
7 ___ Research in Nursing
8 ___ Other (Please specify) ____________________

C. How long have you held this position? ___ years

D. What is the total number of years you have been employed in this institution? ___ years

E. Are you currently involved in any course or program offering interprofessional learning opportunities?

1 ___ yes 2 ___ no

F. If applicable how long have you been involved in such activities in this institution?

13-14

G. If applicable, what percent of your time is spent in teaching and/or planning for courses or programs which include opportunities for interprofessional learning?

___ Percent of time

2. Sex

1 ___ Male 2 ___ Female
3. Age

18-19

4. Educational Preparation

A. Type of program in which you had your initial preparation for nursing, and year earned

1 _____ Diploma
2 _____ Associate Degree
3 _____ Baccalaureate Degree
4 _____ Masters' Degree

A1 Year earned ______ 20

B. Highest degree earned, and year earned

1 _____ Ph.D. or Ed.D.
2 _____ M.S., M.A., or M.Ed.
3 _____ B.S. or B.A.
4 _____ Other (Please specify) ______________________

B1 Year earned ______ 21-22

B2 Highest Degree Earned - Major Area Concentration

1 _____ Nursing
2 _____ Nursing Service Administration
3 _____ Curriculum and Teaching
4 _____ Nursing Education Administration
5 _____ Clinical Nurse Specialist
6 _____ Nursing Research
7 _____ Health Education
8 _____ Natural Science
9 _____ Behavioral Science
10 _____ Adult Education
11 _____ Other (Please specify) ______________________

B3 Major Area of Clinical Focus

1 _____ Medical Surgical Nursing or Fundamentals of Nursing
2 _____ Psychiatric or Mental Health Nursing
3 _____ Maternal-Child Health Nursing
4 _____ Public Health or Community Health Nursing
5 _____ Gerontology
6 _____ Rehabilitation
7 _____ Family Health Practice
8 _____ School Health Practice
9 _____ Other (Please specify) ______________________
C. Current Enrollment in Educational Program

1. Post Doctoral Study
2. Doctoral Study
3. Masters' Study
4. Bachelor's Study
5. Not Matriculated for Degree
6. Special Certification (Please specify) ________

C1. Major Area of Concentration of Current Educational Efforts 30-31

1. Nursing Science
2. Nursing Science Administration
3. Curriculum and Teaching
4. Nursing Education Administration
5. Clinical Nurse Specialist
6. Nursing Research
7. Health Education
8. Natural Science
9. Behavioral Science
10. Adult Education
11. Other (Please specify) ______________________

C2. Current Education - Clinical Focus

1. Medical Surgical Nursing or Fundamentals of Nursing
2. Psychiatric or Mental Health Nursing
3. Maternal-Child Health Nursing
4. Public Health or Community Health Nursing
5. Gerontology
6. Rehabilitation
7. Family Health Practice
8. School Health Practice
9. Other (Please specify) ______________________

5. Professional Nursing Experience

A. How many years have you been involved in teaching? ______ 33-34

B. How many years of total nursing experience have you had other than teaching? ______ 35-36

C. What other kinds of nursing experiences have you had?
Number of years? (Indicate as many as you can)

- Hospital or Nursing Home Staff Nurse
  Number of Years ______ 37-38
- Public Health Staff Nurse
  Number of Years ______ 39-40
- Hospital or Nursing Home Head Nurse or Supervisor
  Number of Years ______ 41-42
- Public Health Supervisor
  Number of Years ______ 43-44
C. What other kinds of nursing experiences have you had?
Number of years? (Indicate as many as you can) (Continued)

Hospital or Nursing Home Administrator
Number of Years 45-46
M.D. Office or Clinic
Number of Years 47-48
School Nursing
Number of Years 49-50
Industrial Nursing
Number of Years 51-52
Private Duty in Hospital
Number of Years 53-54
Independent Practice
Number of Years 55-56
Armed Forces--not identified above
Number of Years 57-58
Other (Please specify) ____________________________
Number of Years 59-60
Other (Please specify) ____________________________
Number of Years 61-62

6. Were you involved in Interprofessional education in any other institution?

1 __ yes 2 __ no

7. As you evaluate generally your experience with interprofessional learning activities, how would you rate the effect upon faculty?

1 ___ Highly rewarding
2 ___ Stimulating and challenging
3 ___ Worthwhile
4 ___ No significant effect
5 ___ Not worth the time and effort
6 ___ Detracted from roles as teacher of nursing
7 ___ Other (Please specify) ____________________________
8 ___ Not Applicable

8. As you evaluate generally your experience with interprofessional learning activities, how would you rate the effect upon students?

1 ___ Highly rewarding
2 ___ Stimulating and challenging
3 ___ Worthwhile
4 ___ No significant effect
5 ___ Not worth the time and effort
6 ___ Detracted from roles as students of nursing
7 ___ Other (Please specify) ____________________________
8 ___ Not Applicable
PROGRAMS OF INTERPROFESSIONAL LEARNING

What is the nature of your program?

<table>
<thead>
<tr>
<th>Core Curriculum</th>
<th>Sequence of Courses</th>
<th>Individual Courses</th>
<th>Other</th>
</tr>
</thead>
</table>

**Level and Numbers of**

<table>
<thead>
<tr>
<th>Title of Course</th>
<th>Nursing Students</th>
<th>Classroom</th>
<th>Clinical</th>
<th>Elective</th>
<th>Required</th>
</tr>
</thead>
</table>

**Title of Other Health Profession Students,**

<table>
<thead>
<tr>
<th>Level and Numbers</th>
<th>Who is Responsible for Administration</th>
<th>How is Course Financed</th>
<th>Who Provides Facilities</th>
<th>When and How Was Course Initiated</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>e.g. (Central Admin., Interprofessional Committee, Individual Schools, other)</td>
<td>e.g. (Central Admin. Budget; Shared equally by schools involved; Individual school sponsor; Outside funding, other)</td>
<td>e.g. (Central Admin.; Shared equally by schools involved; Individual school sponsor; Outside funding, grant, other)</td>
<td>e.g. (Student interest; Admin. direction; Faculty several school interest, Faculty one school interest)</td>
</tr>
<tr>
<td>How are Faculty Members Selected for Participation</td>
<td>How Many Nursing Faculty Involved</td>
<td>How Many Faculty, Other Schools Involved</td>
<td>How are Learning Objectives Determined</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>----------------------------------</td>
<td>----------------------------------------</td>
<td>---------------------------------------</td>
<td></td>
</tr>
<tr>
<td>a. e.g. Appointed by Administration</td>
<td>Describe character and extent of involvement</td>
<td>Describe character and extent of involvement</td>
<td>a. e.g. Central Administration;</td>
<td></td>
</tr>
<tr>
<td>b. Appointed by Faculty Governance</td>
<td></td>
<td></td>
<td>b. Team of Inter-professional faculty</td>
<td></td>
</tr>
<tr>
<td>c. Volunteer</td>
<td></td>
<td></td>
<td>c. Faculty representing 2 schools</td>
<td></td>
</tr>
<tr>
<td>d. Other</td>
<td></td>
<td></td>
<td>d. Faculty of sponsoring school</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>e. Committee</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>f. Other</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How are Content and Learning Strategy Developed</th>
<th>How are Methods for Evaluating Students Determined</th>
<th>How is Course Evaluated</th>
<th>How Long has Course Been in Existence?</th>
</tr>
</thead>
</table>
Are you presently conducting any research in relation to this program?

What is the nature of the research?

Are nursing faculty involved in the research? In what capacity?

Are nursing students involved in the research? In what capacity?

During the past 5 years have you or your faculty been involved in the planning for and/or teaching of interprofessional courses which are no longer being offered?

   ___ yes   ___ no

If yes, describe the nature of the course or program. How long did the program last?

If yes what were the three major reasons for discontinuing the course or program? (Rank the most important as #1, 2nd important as #2)

   ___ Lack of interest of nursing faculty
   ___ Lack of interest of nursing students
   ___ Lack of interest of faculty of one other school
   ___ Lack of interest of students of one other school
   ___ Nursing faculty unable to maintain commitment
   ___ Other faculty unable to maintain commitment
   ___ Insufficient institutional funds available
   ___ Outside funding discontinued
   ___ Scheduling difficulties
   ___ Disagreement among faculty over objectives
   ___ Poor course evaluation
   ___ Interpersonal difficulties
   ___ Administrative directives
   ___ Philosophical incompatibility
   ___ Other (Please specify) __________________________
FACTORS AFFECTING INTERPROFESSIONAL COLLABORATION IN HEALTH CARE EDUCATION

1. Using your experience as a guide, how do you perceive the following factors in relation to effect upon interprofessional collaboration in your institution. Check (√) the appropriate column in terms of your perception of whether the factor is:

Key:  
A Primarily Promoting  
B Primarily Inhibiting  
C No Effect  
D Don't Know

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philosophy of the Institution</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purposes and Objectives of the Institution</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest of Central Administration Personnel</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support from Central Administration</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (Please specify)</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest of Nursing Faculty</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest of Non-Nursing Faculty</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time Available for Nursing Faculty Involvement</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time Available Faculty - Other Health Professions</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal Factors</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing Faculty Ability to Accept Leadership</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing Faculty Willingness to Accept Leadership</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concept of Professional Autonomy</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Preparation of Nursing Faculty</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes of Nursing Faculty toward Other Professions</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes of Other Professions toward Nursing</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (Please specify)</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
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<tr>
<td>Educational Preparation of Nursing Students</td>
<td>23</td>
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<tr>
<td>Personality Characteristics of Nursing Students</td>
<td>24</td>
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<td>Special Interests of Nursing Students</td>
<td>25</td>
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<td>Attitude of Nursing Students toward Collaboration</td>
<td>26</td>
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<tr>
<td>Attitude of Other Health Profession Students toward Nursing</td>
<td>27</td>
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<tr>
<td>Other (Please specify)</td>
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<table>
<thead>
<tr>
<th>Curriculum Development &amp; Implementation</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Philosophy of the Nursing Program</td>
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<tr>
<td>Objectives of the Nursing Curriculum</td>
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<tr>
<td>Philosophy of Other Health Profession Curricula</td>
<td>31</td>
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<tr>
<td>Structure of the Curriculum in Nursing</td>
<td>32</td>
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<tr>
<td>Flexibility of the Curriculum in Nursing</td>
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<tr>
<td>Structure of Other Health Professions Curricula</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Flexibility of Other Health Professions Curricula</td>
<td>35</td>
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<tr>
<td>Other (Please specify)</td>
<td>36</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Resources &amp; Facilities on Campus</th>
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<tr>
<td>Funding for Experimental Programs</td>
<td>37</td>
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<tr>
<td>Funding for Interprofessional Programs</td>
<td>38</td>
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<tr>
<td>Funding for Research</td>
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<td>Audiovisual Services</td>
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<td>Secretarial Support</td>
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<td>Room Space</td>
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<tr>
<td>Other (Please specify)</td>
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<th>Off Campus</th>
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<td>Location of Clinical Facilities</td>
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<td>Cooperation of Clinical Facilities</td>
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<tr>
<td>Attitudes of Personnel in Clinical Facilities</td>
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<tr>
<td>Other (Please specify)</td>
<td>47</td>
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**ANY OTHER FACTORS (Please specify)**
Please indicate whether you agree or disagree with the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. We can no longer educate students of the Health Care Professions in isolation</td>
<td></td>
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<tr>
<td>2. Interprofessional collaborative education belongs at the graduate level not at the undergraduate level</td>
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<tr>
<td>3. Sexism is an inhibiting factor in education for health care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>4. This institution speaks collaboration but practices isolation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>5. Students of the health professions need to learn together to develop positive attitudes and behaviors from the beginning and avoid stereotyping and rigid roles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
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<tr>
<td>6. Students would benefit by increased role sophistication before being exposed to interprofessional activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>7. Health related educational programs would really be enriched by providing shared experiences involving students from several health professions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>8. Before nursing and other health profession students can learn to work collaboratively with each other, faculty from each discipline must learn to work together</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13</td>
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<tr>
<td>9. It is too expensive to attempt to educate students of the health professions together</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>10. Nursing students are in a less equal position on a student health care team</td>
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</tr>
<tr>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Not Certain</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>11. Once other health professions are involved in nursing education the nursing faculty has lost some control of the educational product</td>
<td></td>
<td></td>
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<td>16</td>
<td></td>
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<tr>
<td>12. Stratification and dominance among the health professions will never be eliminated</td>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>13. Optimal health care is best provided to the consumer by interprofessional teams</td>
<td></td>
<td></td>
<td></td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>14. Nursing faculty have more than enough responsibility teaching nursing</td>
<td></td>
<td></td>
<td></td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>15. Rigid administrative procedures here are a barrier to collaboration</td>
<td></td>
<td></td>
<td></td>
<td>20</td>
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</tr>
<tr>
<td>16. If outside funding were available, we would initiate a program of interprofessional learning</td>
<td></td>
<td></td>
<td></td>
<td>21</td>
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<tr>
<td>17. Health professional schools should modify their curricula to permit student teams to work together</td>
<td></td>
<td></td>
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<tr>
<td>18. Nursing will never be a true profession until it demands the baccalaureate degree as its minimum requirement</td>
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<tr>
<td>19. I don't think I am qualified to teach students of other health professions</td>
<td></td>
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<td></td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>20. If there were other health professional programs nearby we would try to develop an interprofessional program</td>
<td></td>
<td></td>
<td></td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>21. This institution is willing to experiment with new and innovative programs</td>
<td></td>
<td></td>
<td></td>
<td>26</td>
<td></td>
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<tr>
<td>22. Nursing students on this campus are really capable of full participation in interprofessional activities</td>
<td></td>
<td></td>
<td></td>
<td>27</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strongly Agree</td>
<td>Agree</td>
<td>Not Certain</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>---</td>
<td>----------------</td>
<td>-------</td>
<td>-------------</td>
<td>----------</td>
<td>-------------------</td>
</tr>
<tr>
<td>23. I would rather work here than any other place I can think of</td>
<td>28</td>
<td></td>
<td></td>
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<tr>
<td>24. The nursing profession should clarify its functions before it attempts to develop interprofessional learning opportunities</td>
<td>29</td>
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</tbody>
</table>
APPENDIX G

SCHOOLS PARTICIPATING
SCHOOLS OF NURSING WILLING TO PARTICIPATE,
OR CONSIDERING PARTICIPATION IN
PROPOSED RESEARCH STUDY

School of Nursing
University of Connecticut
Storrs, Conn.

Division of Nursing
Southern Connecticut College
New Haven, Conn.

School of Nursing
University of Colorado
Denver, Colo.

School of Nursing
Georgetown University
Washington, D.C.

School of Nursing
Howard University
Washington, D.C.

School of Nursing
University of Miami
Miami, Fla.

College of Nursing
University of Florida
Gainesville, Fla.

School of Nursing
Medical College of Georgia
Augusta, Ga.

Department of Professional Nursing
University of Hawaii
School of Nursing
Honolulu, Hawaii

Department of Nursing
DePaul University
Chicago, Ill.

Department of Nursing
Purdue University
West Lafayette, Ind.

School of Nursing
Indiana State University
Terre Haute, Ind.

Department of Nursing
Wichita State University
Wichita, Kansas

School of Nursing
University of Kansas
Kansas City, Kansas

College of Nursing
University of Kentucky
Lexington, Ky.

Division of Nursing
Dillard University
New Orleans, La.

School of Nursing
Louisiana State University
New Orleans, La.

Department of Nursing
Towson State College
Baltimore, Md.

College of Health Professions
University of Lowell
Lowell, Mass.

Department of Nursing
Simmons College
Boston, Mass.

School of Nursing
Michigan State University
East Lansing, Mich.

Department of Nursing
Winona State University
Winona, Minn.
<table>
<thead>
<tr>
<th>Institution</th>
<th>Address</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division of Nursing</td>
<td>Mankato State College</td>
<td>Mankato, Minn.</td>
</tr>
<tr>
<td>School of Nursing</td>
<td>University of Minnesota</td>
<td>Minnesota, Minn.</td>
</tr>
<tr>
<td>Department of Nursing</td>
<td>College of St. Scholastics</td>
<td>Duluth, Minn.</td>
</tr>
<tr>
<td>School of Nursing</td>
<td>University of Southern Mississippi</td>
<td>Hattiesburg, Miss.</td>
</tr>
<tr>
<td>Department of Nursing</td>
<td>St. Anselms College</td>
<td>Manchester, N.H.</td>
</tr>
<tr>
<td>College of Nursing</td>
<td>Niagara University</td>
<td>Niagara, N.Y.</td>
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<tr>
<td>Department of Nursing</td>
<td>Long Island University</td>
<td>Brooklyn, N.Y.</td>
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<tr>
<td>School of Nursing</td>
<td>Adelphi University</td>
<td>Garden City, N.Y.</td>
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<tr>
<td>School of Nursing</td>
<td>State University of New York</td>
<td>Buffalo, N.Y.</td>
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<tr>
<td>School of Nursing</td>
<td>State University of New York</td>
<td>Stony Brook, N.Y.</td>
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<tr>
<td>Department of Nursing</td>
<td>Atlantic Christian College</td>
<td>Wilson, N.C.</td>
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<tr>
<td>School of Nursing</td>
<td>University of North Carolina</td>
<td>Greensboro, N.C.</td>
</tr>
<tr>
<td>School of Nursing</td>
<td>University of North Carolina</td>
<td>Charlotte, N.C.</td>
</tr>
<tr>
<td>College of Nursing and Health</td>
<td>University of Cincinnati</td>
<td>Cincinnati, Ohio</td>
</tr>
<tr>
<td>Department of Nursing</td>
<td>Oklahoma Baptist University</td>
<td>Shawnee, Okla.</td>
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<td>Department of Nursing</td>
<td>Pennsylvania State University</td>
<td>University Park, Pa.</td>
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<td>College of Nursing</td>
<td>Villanova University</td>
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<td>Villa Maria College</td>
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<td>School of Nursing</td>
<td>University of Pittsburgh</td>
<td>Pittsburgh, Pa.</td>
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<tr>
<td>Department of Nursing</td>
<td>Salve Regina College</td>
<td>Newport, R.I.</td>
</tr>
<tr>
<td>College of Nursing</td>
<td>Medical College of South Carolina</td>
<td>Charleston, S.C.</td>
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<td>Vanderbilt University</td>
<td>Nashville, Tenn.</td>
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<tr>
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<td>Incarnate Ward College</td>
<td>San Antonio, Texas</td>
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<tr>
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<td>Eastern Mennonite College</td>
<td>Harrisburg, Va.</td>
</tr>
<tr>
<td>Department of Nursing</td>
<td>West Virginia Wesleyan College</td>
<td>Buckhannon, W. Va.</td>
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<tr>
<td>Department of Nursing</td>
<td>Alderson-Broaddus College</td>
<td>Philippi, W. Va.</td>
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</table>
College of Nursing
University of Wisconsin
Oshkosh, Wis.

Department of Nursing
Alverno College
Milwaukee, Wis.

School of Nursing
University of Wisconsin
Madison, Wis.

Department of Nursing
Viterbo College
La Crosse, Wis.
APPENDIX H

INTERPROFESSIONAL COURSES
CURRENT INTERPROFESSIONAL COURSES OFFERED BY
SCHOOLS PARTICIPATING IN RESEARCH STUDY*

A. SOCIAL SCIENCE AND HUMANITIES

**Human Sexuality
*Medical Ethics
Group Process
Values in Health Care Systems
Family Care in the Team Approach
Human Awareness
Doctor, Nurse, Patient Relationships
Human Behavior
Interviewing
Sociology of Health and Illness
Suicidology
Crisis Theory
Human Relations
Family Systems

B. POLITICAL SCIENCE AND SYSTEMS

Social Systems
History of Medicine
Health Policy Issues
*Health Care Systems
Community Health
*Health Care Team: Roles and Conflicts
Health Leadership Affecting Change
Anthropology of Health
Health Care Organizations
*Interdisciplinary Approach to Health Care
Health Economics

C. CLINICAL PRACTICE

Health History and Patient Assessment
Interdisciplinary Education in Primary Care
Team Practice
Family Care in the Team Approach

D. RESEARCH AND STATISTICS

Biostatistics

*Some titles were offered by more than one school.

**Most commonly offered course.
E. NATURAL AND APPLIED SCIENCE

Applied Science  
Pathophysiology  
Principles of Pathobiology

F. GENERAL HEALTH TOPICS

Spanish for Health Professions  
Principles of Manual Communication  
Teaching Language and Speech to Hearing Impaired  
Special Topics in Health Education  
Gerontology  
Introduction to Health Services  
Drugs and Society  
The Troubled Child  
Introduction to Health
APPENDIX I

BIOGRAPHICAL DATA ON PARTICIPANTS
### APPENDIX I

#### Table 18. Current Title of Respondents

<table>
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<tr>
<th></th>
<th>A</th>
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<th>% of Total Responses</th>
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<td>%</td>
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<tr>
<td>Assistant Dean*</td>
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<td>Department Chairman*</td>
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<td>Professor</td>
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<td>Associate Professor</td>
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<td>Project Director*</td>
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A = Schools with current Interprofessional Learning.

B = Schools without current Interprofessional Learning.

*When two titles given administrative and professional, administrative title selected.
**APPENDIX I (Continued)**

Table 19. Current Teaching Responsibility

<table>
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<th>% of Total Responses</th>
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<td>%</td>
<td></td>
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<tr>
<td>Medical-Surgical Nursing</td>
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<td>22</td>
<td>18</td>
<td>23</td>
<td>22</td>
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<tr>
<td>Maternal Child Nursing</td>
<td>23</td>
<td>19</td>
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<td>Psychiatric-Mental Health Nursing</td>
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<td>13</td>
<td>16</td>
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<td>Public Health-Community Health Nursing</td>
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<td>7</td>
<td>9</td>
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<tr>
<td>Combination of Above</td>
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<td><strong>Total</strong></td>
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<td>75**</td>
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</table>

A = Schools with current Interprofessional Learning.

B = Schools without current Interprofessional Learning.

*One participant did not report this data.

**Two participants did not report this data.
### APPENDIX I (Continued)

Table 20. Length of Time in Current Position

<table>
<thead>
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<th></th>
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<th>% of Total Responses</th>
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<td>No.</td>
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<td>1 year or less</td>
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<td>19</td>
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<td>2-5 years</td>
<td>73</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>5-10 years</td>
<td>30</td>
<td>25</td>
<td>14</td>
</tr>
<tr>
<td>10-20 years</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>120*</td>
<td>99</td>
<td>75**</td>
</tr>
</tbody>
</table>

*A = Schools with current Interprofessional Learning.

*B = Schools without current Interprofessional Learning.

*One participant did not report this data.

**Five participants did not report this data.
## Table 21. Length of Time in Institution

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>% of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>1 year or less</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>2-5 years</td>
<td>58</td>
<td>48</td>
</tr>
<tr>
<td>5-10 years</td>
<td>39</td>
<td>32</td>
</tr>
<tr>
<td>10-20 years</td>
<td>15</td>
<td>12</td>
</tr>
<tr>
<td>20+ years</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td>100</td>
</tr>
</tbody>
</table>

A = Schools with current Interprofessional Learning.

B = Schools without current Interprofessional Learning.

*Two participants did not report this data.
### Table 22. Sex of Respondents

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th></th>
<th></th>
<th></th>
<th>B</th>
<th></th>
<th></th>
<th>% of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td></td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td>Responses</td>
</tr>
<tr>
<td>Male</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Female</td>
<td>111</td>
<td>92</td>
<td>73</td>
<td>91</td>
<td></td>
<td></td>
<td></td>
<td>92</td>
</tr>
<tr>
<td>Total</td>
<td>114*</td>
<td>95</td>
<td>76**</td>
<td>95</td>
<td></td>
<td></td>
<td></td>
<td>95</td>
</tr>
</tbody>
</table>

A = Schools with current Interprofessional Learning.

B = Schools without current Interprofessional Learning.

♦Seven participants did not report this data.

**Four participants did not report this data.
Table 23. Age of Respondents

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>% of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>No Response</td>
<td>54</td>
<td>45</td>
<td>29</td>
</tr>
<tr>
<td>20-30</td>
<td>15</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>30-40</td>
<td>24</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>40-50</td>
<td>15</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Over 50</td>
<td>13</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td>100</td>
<td>80</td>
</tr>
</tbody>
</table>

A = Schools with current Interprofessional Learning.

B = Schools without current Interprofessional Learning.
APPENDIX I (Continued)

Table 24. Initial Education

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th></th>
<th>B</th>
<th></th>
<th>% of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Nursing Diploma</td>
<td>51</td>
<td>42</td>
<td>43</td>
<td>54</td>
<td>47</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Bachelor of Arts</td>
<td>59</td>
<td>49</td>
<td>34</td>
<td>43</td>
<td>46</td>
</tr>
<tr>
<td>Master of Science in Nursing</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>117*</td>
<td>97</td>
<td>80</td>
<td>100</td>
<td>99</td>
</tr>
</tbody>
</table>

A = Schools with current Interprofessional Learning.

B = Schools without current Interprofessional Learning.

*Four participants did not report this data.
APPENDIX I (Continued)

Table 25. Year of Initial Education

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th></th>
<th>B</th>
<th></th>
<th>% of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Before 1940</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1940 - 1950</td>
<td>27</td>
<td>24</td>
<td>14</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>1951 - 1960</td>
<td>27</td>
<td>24</td>
<td>31</td>
<td>39</td>
<td>31</td>
</tr>
<tr>
<td>1961 - 1970</td>
<td>48</td>
<td>40</td>
<td>24</td>
<td>30</td>
<td>36</td>
</tr>
<tr>
<td>1971</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>108*</td>
<td>93</td>
<td>76**</td>
<td>97</td>
<td>94</td>
</tr>
</tbody>
</table>

A = Schools with current Interprofessional Learning.

B = Schools without current Interprofessional Learning.

*Thirteen participants did not report this data.

**Four participants did not report this data.
### APPENDIX I (Continued)

#### Table 26. Highest Degree: Clinical Focus

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>% of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td><strong>Medical Surgical/ Fundamentals of Nursing</strong></td>
<td>39</td>
<td>32</td>
<td>28</td>
</tr>
<tr>
<td><strong>Psychiatric or Mental Health Nursing</strong></td>
<td>18</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td><strong>Maternal-Child/Health Pediatrics</strong></td>
<td>24</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td><strong>Public Health-Community Health Nursing</strong></td>
<td>22</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td><strong>Gerontology</strong></td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Rehabilitation</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Family Health Practice</strong></td>
<td>3</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td><strong>Combination of Above</strong></td>
<td>11</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>119*</td>
<td>99</td>
<td>78*</td>
</tr>
</tbody>
</table>

A = Schools with current Interprofessional Learning.

B = Schools without current Interprofessional Learning.

*Two participants did not report this data.*
APPENDIX I (Continued)

Table 27. Current Educational Enrollment

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th></th>
<th>B</th>
<th></th>
<th>% of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>25</td>
<td>21</td>
<td>23</td>
<td>29</td>
<td>24</td>
</tr>
<tr>
<td>Post Doctoral</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Doctoral Study</td>
<td>17</td>
<td>14</td>
<td>17</td>
<td>21</td>
<td>16</td>
</tr>
<tr>
<td>Masters Study</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Non Matriculated Study</td>
<td>68</td>
<td>56</td>
<td>28</td>
<td>35</td>
<td>48</td>
</tr>
<tr>
<td>Special Certification</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>121</td>
<td>100</td>
<td>80</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

A = Schools with current Interprofessional Learning.
B = Schools without current Interprofessional Learning.
APPENDIX I (Continued)

Table 28. Current Education: Major Concentration

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th></th>
<th>B</th>
<th></th>
<th>% of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Doesn't Apply</td>
<td>57</td>
<td>47</td>
<td>34</td>
<td>42</td>
<td>45</td>
</tr>
<tr>
<td>Nursing Science</td>
<td>4</td>
<td>3</td>
<td>9</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Curriculum and Teaching</td>
<td>24</td>
<td>20</td>
<td>12</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>Nursing Education/Administration</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Clinical Specialist</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Nursing Research</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Health Education</td>
<td>3</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Natural Science</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Behavioral Science</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Adult Education</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Combination or Other</td>
<td>15</td>
<td>12</td>
<td>13</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>121</td>
<td>100</td>
<td>80</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

*A* = Schools with current Interprofessional Learning.

*B* = Schools without current Interprofessional Learning.
APPENDIX I (Continued)

Table 29. Current Education: Clinical Focus

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th></th>
<th>B</th>
<th></th>
<th>% of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>None or Doesn't Apply</td>
<td>61</td>
<td>50</td>
<td>44</td>
<td>55</td>
<td>52</td>
</tr>
<tr>
<td>Medical Surgical/Fundamentals of Nursing</td>
<td>11</td>
<td>9</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Psychiatric or Mental Health Nursing</td>
<td>5</td>
<td>4</td>
<td>9</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Maternal-Child/Health Pediatrics</td>
<td>14</td>
<td>12</td>
<td>2</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Public Health-Community Health Nursing</td>
<td>8</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Gerontology</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Rehabilitation</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Family Health Practice</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Combination of Above</td>
<td>14</td>
<td>12</td>
<td>9</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td>100</td>
<td>80</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

A = Schools with current Interprofessional Learning.

B = Schools without current Interprofessional Learning.
APPENDIX I (Continued)

Table 30. Number of Years in Teaching

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>% of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>1 year</td>
<td>4</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>2-5 years</td>
<td>37</td>
<td>31</td>
<td>16</td>
</tr>
<tr>
<td>6-10 years</td>
<td>40</td>
<td>33</td>
<td>24</td>
</tr>
<tr>
<td>11-20 years</td>
<td>35</td>
<td>29</td>
<td>28</td>
</tr>
<tr>
<td>21+ years</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>120*</td>
<td>99</td>
<td>79*</td>
</tr>
</tbody>
</table>

A = Schools with current Interprofessional Learning.

B = Schools without current Interprofessional Learning.

*One participant did not report this data.
### Table 31. Years of Nursing Experience: Non Teaching

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>% of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 year</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>2-5 years</td>
<td>51</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>6-10 years</td>
<td>24</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>11-20 years</td>
<td>24</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td>21+ years</td>
<td>11</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>116*</td>
<td>78**</td>
<td>99</td>
</tr>
</tbody>
</table>

A = Schools with current Interprofessional Learning.

B = Schools without current Interprofessional Learning.

*Five participants did not report this data.

**Two participants did not report this data.
Table 32. Past Involvement in Interprofessional Teaching

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>% of Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Yes</td>
<td>35</td>
<td>29</td>
<td>23</td>
</tr>
<tr>
<td>No</td>
<td>86</td>
<td>71</td>
<td>57</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td>100</td>
<td>80</td>
</tr>
</tbody>
</table>

A = Schools with current Interprofessional Learning.

B = Schools without current Interprofessional Learning
APPENDIX J

SUMMARY RESPONSES ALL PARTICIPANTS PERCEPTIONS
OF FACTORS PROMOTING AND INHIBITING
INTERPROFESSIONAL LEARNING
### APPENDIX J (Continued)

Table 33. Summary of Response 201 Nurse Educators Factors Promoting and Inhibiting Interprofessional Learning

<table>
<thead>
<tr>
<th>Primarily Promoting</th>
<th>No Effect</th>
<th>Don't Know</th>
<th>Primarily Inhibiting</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Administration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philosophy of the Institution</td>
<td>142</td>
<td>71</td>
<td>20</td>
</tr>
<tr>
<td>Purposes and Objectives of the Institution</td>
<td>143</td>
<td>71</td>
<td>20</td>
</tr>
<tr>
<td>Interest of Central Administration Personnel</td>
<td>93</td>
<td>46</td>
<td>35</td>
</tr>
<tr>
<td>Support from Central Administration</td>
<td>92</td>
<td>46</td>
<td>34</td>
</tr>
</tbody>
</table>

Curriculum Development and Implementation

| Philosophy of the Nursing Program | 161 | 80 | 12 | 6 | 6 | 3 | 14 | 7 |
| Objectives of the Nursing Curriculum | 158 | 79 | 13 | 7 | 5 | 3 | 18 | 9 |
| Philosophy of Other Health Profession Curricula | 61 | 30 | 8 | 4 | 99 | 50 | 23 | 11 |
### Curriculum Development and Implementation

<table>
<thead>
<tr>
<th>Area</th>
<th>Primarily Promoting No.</th>
<th>Primarily Promoting %</th>
<th>No Effect No.</th>
<th>No Effect %</th>
<th>Don't Know No.</th>
<th>Don't Know %</th>
<th>Primarily Inhibiting No.</th>
<th>Primarily Inhibiting %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure of the Curriculum in Nursing</td>
<td>103</td>
<td>51</td>
<td>13</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>72</td>
<td>36</td>
</tr>
<tr>
<td>Flexibility of the Curriculum in Nursing</td>
<td>94</td>
<td>47</td>
<td>13</td>
<td>7</td>
<td>9</td>
<td>5</td>
<td>75</td>
<td>37</td>
</tr>
<tr>
<td>Structure of Health Professions Curricula</td>
<td>30</td>
<td>15</td>
<td>3</td>
<td>2</td>
<td>105</td>
<td>52</td>
<td>49</td>
<td>24</td>
</tr>
<tr>
<td>Flexibility of Other Health Professions Curricula</td>
<td>31</td>
<td>15</td>
<td>4</td>
<td>2</td>
<td>107</td>
<td>53</td>
<td>49</td>
<td>24</td>
</tr>
</tbody>
</table>

### Faculty

<table>
<thead>
<tr>
<th>Area</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
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<th>%</th>
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</thead>
<tbody>
<tr>
<td>Interest of Nursing Faculty</td>
<td>142</td>
<td>7</td>
<td>15</td>
<td>8</td>
<td>12</td>
<td>6</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>Interest of Non-Nursing Faculty</td>
<td>76</td>
<td>38</td>
<td>10</td>
<td>5</td>
<td>69</td>
<td>34</td>
<td>35</td>
<td>17</td>
</tr>
<tr>
<td>Time Available for Nursing Faculty Involvement</td>
<td>26</td>
<td>13</td>
<td>14</td>
<td>7</td>
<td>14</td>
<td>7</td>
<td>135</td>
<td>67</td>
</tr>
<tr>
<td>Time Available Faculty--Other Health Professions</td>
<td>30</td>
<td>15</td>
<td>11</td>
<td>6</td>
<td>77</td>
<td>38</td>
<td>70</td>
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</table>
### APPENDIX J (Continued)

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Primarily Promoting</th>
<th>No Effect</th>
<th>Don't Know</th>
<th>Primarily Inhibiting</th>
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</thead>
<tbody>
<tr>
<td>Interpersonal Factors</td>
<td>84 42</td>
<td>16 8</td>
<td>42 21</td>
<td>47 23</td>
</tr>
<tr>
<td>Nursing Faculty Ability to Accept Leadership</td>
<td>133 66</td>
<td>8 4</td>
<td>14 7</td>
<td>36 18</td>
</tr>
<tr>
<td>Nursing Faculty Willingness to Accept Leadership</td>
<td>111 55</td>
<td>10 5</td>
<td>21 10</td>
<td>51 25</td>
</tr>
<tr>
<td>Concept of Professional Autonomy</td>
<td>95 47</td>
<td>13 7</td>
<td>16 8</td>
<td>67 33</td>
</tr>
<tr>
<td>Educational Preparation of Nursing Faculty</td>
<td>100 50</td>
<td>18 9</td>
<td>20 10</td>
<td>52 26</td>
</tr>
<tr>
<td>Attitudes of Nursing Faculty toward Other Professions</td>
<td>129 64</td>
<td>9 5</td>
<td>14 7</td>
<td>37 18</td>
</tr>
<tr>
<td>Attitudes of Other Professions toward Nursing</td>
<td>57 28</td>
<td>7 4</td>
<td>39 19</td>
<td>83 41</td>
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</tbody>
</table>

### Students

| Educational Preparation of Nursing Students | 151 75 | 11 6 | 7 4 | 22 11 |
### APPENDIX J (Continued)

<table>
<thead>
<tr>
<th></th>
<th>Primarily Promoting No.</th>
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<th>Don't Know No.</th>
<th>Primarily Inhibiting No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personality Characteristics of Nursing Students</td>
<td>149 74</td>
<td>11 6</td>
<td>17 9</td>
<td>15 8</td>
</tr>
<tr>
<td>Special Interest of Nursing Students</td>
<td>149 72</td>
<td>13 7</td>
<td>20 10</td>
<td>13 7</td>
</tr>
<tr>
<td>Attitude of Nursing Students toward Collaboration</td>
<td>166 83</td>
<td>3 2</td>
<td>13 7</td>
<td>10 5</td>
</tr>
<tr>
<td>Attitude of Other Health Profession Students toward Nursing</td>
<td>65 33</td>
<td>5 3</td>
<td>67 33</td>
<td>34 22</td>
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</tbody>
</table>

### Resources and Facilities on Campus

<table>
<thead>
<tr>
<th></th>
<th>Funding for Experimental Programs</th>
<th>Funding for Interprofessional Programs</th>
<th>Funding for Research</th>
<th>Audiovisual Services</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>43 21 11 6 41 20 98 49</td>
<td>41 20 12 6 50 25 90 45</td>
<td>34 17 21 10 45 22 93 46</td>
<td>130 65 11 6 16 8 36 18</td>
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## APPENDIX J (Continued)

<table>
<thead>
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<th>Don’t Know No.</th>
<th>Primarily Inhibiting No.</th>
</tr>
</thead>
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<tr>
<td><strong>Resources and Facilities on Campus</strong></td>
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<tr>
<td>Secretarial Support</td>
<td>75</td>
<td>16</td>
<td>36</td>
<td>65</td>
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<tr>
<td>Room Space</td>
<td>67</td>
<td>15</td>
<td>29</td>
<td>81</td>
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<tr>
<td><strong>Off Campus</strong></td>
<td></td>
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<tr>
<td>Location of Clinical Facilities</td>
<td>85</td>
<td>16</td>
<td>13</td>
<td>69</td>
</tr>
<tr>
<td>Cooperation of Clinical Facilities</td>
<td>101</td>
<td>10</td>
<td>42</td>
<td>36</td>
</tr>
<tr>
<td>Attitudes of Personnel in Clinical Facilities</td>
<td>82</td>
<td>13</td>
<td>45</td>
<td>48</td>
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### Table 34. Statements Related to Factors Promoting and Inhibiting

<table>
<thead>
<tr>
<th>Administration</th>
<th>Strongly Agree No.</th>
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<th>Agree No.</th>
<th>Agree %</th>
<th>Not Certain No.</th>
<th>Not Certain %</th>
<th>Disagree No.</th>
<th>Disagree %</th>
<th>Strongly Disagree No.</th>
<th>Strongly Disagree %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid administrative procedures here are a barrier to collaboration</td>
<td>15</td>
<td>8</td>
<td>41</td>
<td>20</td>
<td>39</td>
<td>19</td>
<td>89</td>
<td>44</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>This institution is willing to experiment with new and innovative programs</td>
<td>46</td>
<td>23</td>
<td>99</td>
<td>50</td>
<td>39</td>
<td>19</td>
<td>11</td>
<td>6</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>This institution speaks collaboration but practices isolation</td>
<td>22</td>
<td>11</td>
<td>75</td>
<td>37</td>
<td>30</td>
<td>15</td>
<td>61</td>
<td>30</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Curriculum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing will never be a true profession until it demands the baccalaureate degree as its minimum requirement</td>
<td>95</td>
<td>47</td>
<td>70</td>
<td>35</td>
<td>17</td>
<td>9</td>
<td>14</td>
<td>7</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Interprofessional collaborative education belongs at the graduate level not at the undergraduate level</td>
<td>4</td>
<td>2</td>
<td>10</td>
<td>5</td>
<td>15</td>
<td>8</td>
<td>108</td>
<td>54</td>
<td>63</td>
<td>31</td>
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</table>
### Curriculum

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree No.</th>
<th>Strongly Agree %</th>
<th>Agree No.</th>
<th>Agree %</th>
<th>Not Certain No.</th>
<th>Not Certain %</th>
<th>Disagree No.</th>
<th>Disagree %</th>
<th>Strongly Disagree No.</th>
<th>Strongly Disagree %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health professional schools should modify their curricula to permit student teams to work together</td>
<td>58</td>
<td>29</td>
<td>125</td>
<td>62</td>
<td>17</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Health related educational programs would really be enriched by providing shared experiences involving students from several health professions</td>
<td>108</td>
<td>54</td>
<td>88</td>
<td>44</td>
<td>5</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Faculty, Preparation, Philosophy and Attitudes

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree No.</th>
<th>Strongly Agree %</th>
<th>Agree No.</th>
<th>Agree %</th>
<th>Not Certain No.</th>
<th>Not Certain %</th>
<th>Disagree No.</th>
<th>Disagree %</th>
<th>Strongly Disagree No.</th>
<th>Strongly Disagree %</th>
</tr>
</thead>
<tbody>
<tr>
<td>We can no longer educate students of the Health Care Professions in isolation</td>
<td>142</td>
<td>71</td>
<td>51</td>
<td>25</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sexism is an inhibiting factor in education for health care</td>
<td>32</td>
<td>16</td>
<td>78</td>
<td>39</td>
<td>30</td>
<td>15</td>
<td>42</td>
<td>21</td>
<td>19</td>
<td>10</td>
</tr>
</tbody>
</table>
### Faculty, Preparation, Philosophy and Attitudes

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before nursing and other health profession students can learn to work collaboratively with each other, faculty from each discipline must learn to work together</td>
<td>111</td>
<td>55</td>
<td>75</td>
<td>37</td>
<td>8</td>
</tr>
<tr>
<td>I don't think I am qualified to teach students of other health professions</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>The nursing profession should clarify its functions before it attempts to develop interprofessional learning opportunities</td>
<td>22</td>
<td>11</td>
<td>57</td>
<td>28</td>
<td>81</td>
</tr>
<tr>
<td>I would rather work here than any other place I can think of</td>
<td>37</td>
<td>18</td>
<td>70</td>
<td>35</td>
<td>53</td>
</tr>
<tr>
<td>Once other health professions are involved in nursing education the nursing faculty has lost some control of the educational product</td>
<td>2</td>
<td>1</td>
<td>28</td>
<td>14</td>
<td>34</td>
</tr>
</tbody>
</table>


### APPENDIX J (Continued)

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
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#### Faculty, Preparation, Philosophy and Attitudes

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree and dominance among the health professions will be eliminated</td>
<td>1</td>
<td>1</td>
<td>40</td>
<td>20</td>
<td>89</td>
</tr>
<tr>
<td>Optimal health care is best provided to the consumer by interprofessional teams</td>
<td>107</td>
<td>53</td>
<td>85</td>
<td>42</td>
<td>7</td>
</tr>
<tr>
<td>Nursing faculty have more than enough responsibility teaching nursing</td>
<td>5</td>
<td>3</td>
<td>28</td>
<td>14</td>
<td>33</td>
</tr>
</tbody>
</table>

#### Students

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students of the health professions need to learn together to develop positive attitudes and behaviors from the beginning and avoid stereotyping and rigid roles</td>
<td>127</td>
<td>63</td>
<td>65</td>
<td>32</td>
<td>5</td>
</tr>
</tbody>
</table>
### Students

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Students would benefit by increased role sophistication before being exposed to interprofessional activities</td>
<td>32</td>
<td>16</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>Nursing students on this campus are really capable of full participation in interprofessional activities</td>
<td>64</td>
<td>32</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Nursing students are in a less equal position on a student health care team</td>
<td>7</td>
<td>4</td>
<td>44</td>
<td>22</td>
</tr>
</tbody>
</table>

### Resources

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>It is too expensive to attempt to educate students of the health professions together</td>
<td>-</td>
<td>-</td>
<td>6</td>
<td>3</td>
</tr>
</tbody>
</table>
## APPENDIX J (Continued)

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
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<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>31</td>
<td>15</td>
<td>50</td>
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</tr>
<tr>
<td>14</td>
<td>7</td>
<td>4</td>
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### Resources

If outside funding were available, we would initiate a program of interprofessional learning.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Certain</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>15</td>
<td>8</td>
<td>45</td>
<td>22</td>
<td>90</td>
</tr>
<tr>
<td>24</td>
<td>12</td>
<td>5</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

If there were other health professional programs nearby we would try to develop an interprofessional program.