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## PROSPECTIVE ANALYSIS IN NURSING EDUCATION

### 1. Introduction

The economic crisis which is affecting the world as a whole has been most severe in its impact in the Region of the Americas since the eighties. The progressive worsening of the problems of the economically dependent countries in Latin America and the Caribbean was expressed most emphatically from the outset in the unfavorable balance of payments, in external indebtedness, and maladjustments in their domestic policies, as evidenced in high rates of inflation, unemployment, and declining income.

The deterioration of the political and socioeconomic framework of the countries and the alternatives, presented from an economic point of view exclusively, prompted cutbacks in government spending, which particularly affected the social sector. The effects of the measures adopted have brought a further worsening in the living conditions of the population and a weakening of the effectiveness of the social services traditionally provided by the governments. Population shifts, the dynamics of institutional changes, including the definition of professional functions, and the availability and demand for jobs highlight the gravity of the situation.

The health sector, identified as an integral part of the social sector and regarded as a key element for obtaining better living conditions for the population, reflects the impact of the crisis. The direct effects of the crisis are manifested in the population initially through a deterioration in infant nutrition and in the intensification of disease rates--to cite some areas which demand greater health care. Lack of access to services for ever-increasing sections of the population is another critical area. The long-term effects are estimated to be even greater than those presently apparent.

To deal with this health situation, the governments of Latin America and the Caribbean adopted HFA/2000 as the main social goal of the coming decades aimed at "the attainment by all citizens of a level of health that will permit them to lead a social and economically productive life." The acceptance of this principle calls for profound changes at both societal and health systems levels involving fundamental shifts in both the strategies adopted within the health systems and in the models used for service delivery, as well as in the process of formation and utilization of health manpower.

The strategies that each country has adopted to change the health situation towards the goal of HFA/2000, the seriousness of the conditions, and the urgent need to address these with new models of practice have resulted in the implementation of alternatives that often lack rationality and bring about costly changes which, instead of contributing to improvement of the existing situation, can worsen it. Ten years have already passed since the acceptance of the proposal of HFA/2000, but the health of the population continues to worsen. The specific actions of the health sector have not been able to produce the desired effect due, at least in part, to the lack of changes in the social structure that would ensure an improvement in other health determinants. The need for new models of delivery of services within the health sector which present real alternatives to the situation described has demonstrated the need for society, through its institutions and groups, to define its role in this process of change.

Nursing, as a health profession, is involved in the search for an effective solution. This can be seen through some advances made in its role in the application of the policy of primary health care. However, on the other hand, the majority of the nursing profession continues performing traditional functions in hospitals and in the formal public health services.

With the spotlight on the growing demands of the population for their health needs to be met, for the introduction of new health policies, and for the adoption of a primary health care strategy, there is an increasing awareness in the nursing profession which recognizes that the present model of nursing service delivery must be changed and that nurses must play a more

active role in contributing to the goal of HFA/2000. Along with these changes, nursing manpower formation processes will also need to be reoriented, taking into account the political and socioeconomic conditions found in a particular society, the health problems, the organization of the health services, nursing's scientific and technological knowledge, and the development of the educational process.

It is important in a society experiencing the changes described that the contribution of nursing be made clear, bearing in mind not only the present situation but also the development of this society towards the future.

Certainly nursing has played a part in many of the advances in health, but the present situation seems to call for more effective efforts which are even more consistent with the socioeconomic realities of the countries and are realized in such a way that they demonstrate potential in improving the health situation and in steering it towards the goal of HFA/2000.

The school of nursing has traditionally used two processes in defining its task: 1. evaluation and 2. planning.

Evaluation has been used to find out how nursing education has developed in a particular school (in terms of pre-established criteria). Although evaluations have provided a great deal of information and guidance, they have emphasized the focus on technical and administrative issues and on curricula, using a perspective which tends to limit its scope to the profession itself.

On the other hand, planning has been used to further the progress of educational institutions. However, as in the case of evaluation, it has been little used to consider health as a component of social, political and economic development not because the methodology impedes such an examination but perhaps because the process has been based on a point of view that stems from that used in the technical evaluations.

In the course of exploring methodologies that would facilitate nursing's taking on a more relevant role in relation to HFA/2000, one has been found that seems to have many advantages. Moreover, it has components of familiar processes, and this will make its application easier. It is called prospective analysis.

Prospective analysis is a methodology which offers the possibility of creating a desired future while taking into account the individual social and historical background of a given institution, not only in relation to its present situation and historical trajectory, but also contemplating a future both desired and attainable. The incorporation of socioeconomic and political aspects is essential to the search for solutions to the present situation. The idea of using a desired future as the point of view for identifying the school's actual situation lets the institution identify the distance between these two points, and gives it an idea of the effort necessary to achieve a proposed future. In addition, as the mind dwells on how to establish a road towards the future, prospective analysis tends to avoid the problems of guilt and defensiveness common to the traditional process of evaluation and makes it possible to channel energies into the process of change.

Before a detailed study of this methodology is begun, an examination of efforts to date would be useful. In order to place prospective analysis in context, the history of evaluation in the region will be examined to facilitate an understanding of the efforts of nursing schools to improve themselves.

## II. Nursing evaluation and planning in Latin America

The expansion and institutionalization of nursing education in schools attached to hospitals, ministries of health, and universities which can be observed after the Second World War led PAHO in 1949 to promote the evaluation of nursing education in Latin America. A survey was then carried out in existing schools to determine which of them could be used as training centers for nurses from other countries, where professional education was still in its infancy.

Findings showed that nursing was biased towards hospital care. The emphasis was on providing care in operating rooms, and public health training was pushed into the background. Basic courses consisted of theoretical instruction and practical experience but relationships between them were not generally established. The teaching of social sciences was not relevant to the curricula. Existing programs generally did not conform to university requirements, especially in the area relating to previous schooling.

This initial effort to bring evaluation to the majority of Latin American schools made it possible to set minimum standards in various areas for higher educational entry requirements, for the preparation of administrators and teaching staff, for a minimum duration for the program, and for educational experience in hospitals and in the public health sector.

Nursing education was systematically incorporated into the university sector starting in the fifties and was strongly influenced by the prevailing pedagogical models of medical training. Based on the Flexnerian reform, the pedagogical model set clearly defined boundaries between basic instruction and clinical training. A number of programs began to offer the basic sciences as subjects in the specialized departments of the university. Hospitals continued to be the primary setting for professional experiences, and the few experiences available in public health were provided in the final academic year in "model" health centers.

In 1959 a second survey of nursing schools was conducted under the auspices of PAHO to identify the number of schools meeting minimum requirements established after the evaluation, the changes that had been introduced, and the trends that had emerged since 1949. Another aim was to identify the areas that needed to be changed to ensure proper education of nurses.

The study found that the number of schools that met minimum requirements had doubled and that there had been an increase in the number of students and an increase in the number of schools that required completion of secondary education as a condition for admission. Information on the training of directors, supervisors, and instructors showed little change since 1949. Much still needed to be done to improve their level of preparation. The curricula revealed that more time was being devoted to public health and communicable diseases.

These changes in nursing training coincided with the development of preventive medicine, the setting up of comprehensive health services, and the influence of the Inter American Cooperative Public Health Service. Clinical practice was better utilized and although most teaching was still subject-centered, there was already integration within areas of nursing in some schools. Subjects such as the social and behavioral sciences were beginning to figure as core subjects in the curricula.

In 1976 a third evaluation of nursing education in university schools was undertaken. Its purpose was to determine to what extent the schools were meeting the health needs of the countries so that on the basis of that evaluation, the needed changes could be identified and future plans developed. Teachers and students, as well as administrators of nursing services were represented in the evaluation.

This study revealed a gap between the goals of education and the expectations of practice. Another point to emerge from the study was the greater recognition given to nursing education programs by universities, as



reflected in a larger measure of independence enjoyed by nursing schools in their academic matters and the participation of some schools in university governing councils.

In 1982 PAHO carried out another study of professional nursing education programs in Latin America. The study examined professional nursing education in Latin America so as to propose alternatives for the development of nursing education systems capable of coping with the problems and demands of the health services.

The 1982 study found that professional nursing education in the Region was very complex and varied considerably from country to country. It felt a more in-depth study was needed of relationships among the different program orientations and professional practice. It also identified difficulties in describing the occupational profile of the university nurse because of the failure to define the technical divisions within nursing and health upon which the profiles could be based for the different program levels.

Efforts to improve nursing education have not been confined to the regional level. In recent decades, aware of the leadership role of nursing in the achievement of the goal of Health for All by the Year 2000, some nursing schools in Latin America have embarked on curriculum reform to bring their programs into line with the realities of each country and its population needs. These reforms seek to orient nursing education from a social epidemiologic viewpoint based on the premises of the integration of education-service and community participation. In addition, they consider problem-solving and decision-making as one of the basic care concepts or unifying threads of the curricula.

Evaluations of several schools done by the schools themselves or by their governments for a variety of purposes and using different methodologies have also resulted in curriculum reform. Studies similar to the regional studies and those in which the historical analysis methodology has been applied to nursing in order to acquire a better understanding of the causes of the situation in the profession and the forces at work in it can be mentioned in this group.

PAHO has also been active in nursing planning. Following the recommendation of health ministers in 1970 in the Ten-Year Health Plan for the Americas that nurses be trained in planning and programming so that they could be involved in decision-making in those areas, a project was initiated for that purpose. Based on the systems analysis approach, training in planning methodology was given in 1973-75 to a group of nurses (approximately 150) in service and teaching with the intent that they disseminate their knowledge in their countries. The training included ways of examining the socio-economic and political situation, the identification of constraints, and the utilization of information in the planning process. There was discussion of how to maximize strategies in the process of change. In several countries these nurses have attained important positions in the health and manpower planning processes. Many of the same techniques that have been used in planning are also used in bringing about change using the prospective analysis methodology, as will be seen in what follows.

### III. Prospective Analysis

Prospective analysis is a methodology used to examine a given situation and, on the basis of that analysis, propose(?) changes for the future. Its application in nursing schools could apparently be of great value as it consists of a systematic effort to find, explore, and examine different aspects of a future situation with emphasis on the truly possible. Using this methodology, a situation taking into account a wide range of factors and their possible interrelationships is simulated. Within the simulation, the implications of a change or the impact of a new element can be assessed. It also tries to distinguish clearly between ends and means and focuses more on qualitative than quantitative aspects.

As its name indicates, there are two key components. The first is the perspective that one takes towards the situation under study. The second is the method of analyzing this situation.

The perspective of this methodology is different from the one traditionally used since it tries to project into the intermediate future and examine what is needed to achieve this future. To some extent it can be seen as looking backwards from the future to the present and acting on the basis of that vision to effect change. The essence of prospective analysis is that all situations are viewed within a comprehensive and integrated focus; health, for example, is seen as both a phenomenon and a component of socioeconomic and political development and not as a separate element.

The second key element is the method of analysis. With the future as the point of departure, various alternatives for attaining the desired future are examined not only from the standpoint of their effectiveness but also with the intent of appreciating the social implications of the different strategies which would attain the desired future. The possibilities of examining the social implications of any action before becoming committed to it is one of the advantages of this methodology.

The methodology is flexible, and therefore can be adapted to different specific realities, to different conditions of curriculum or institutional development, to different stages in the development of the nursing profession, and to different sociopolitical situations.

The process of using prospective analysis methodology in development in nursing is seen as one which begins with an exploratory or diagnostic phase, followed by an in-depth analysis and then the formulation of a proposal for change which is established in the form of a normative model, followed by a phase of implementation in which strategies are developed to achieve the model. The process does not end there. While the strategies are being implemented and the contextual situation changes, the process must therefore be realized as frequently as necessary in order to maintain its prospective character.

The richness of the methodology derives from a number of factors. The most important may be that the institution acquires a methodology that allows it to be its own agent of change. In addition, the dynamic that results when prospective analysis is properly used generates action. The creativity of the participants is activated and they are stimulated to affect their reality in innovative ways. A dialogue is promoted amongst the different sectors of the institution, and new knowledge can emerge from the discussions held to achieve a consensus. The process brings institutional differences to light and facilitates decision-making for the unification of goals. Prospective analysis gives the institutions a methodology for the evaluation of their role in the context of HFA/2000 and for planning strategies to achieve this goal. Prospective analysis promotes a positive approach. It looks to the future and focuses on what institutions can achieve, thus eliminating the unpleasant side of the evaluation process in which the school assesses what it has been doing, looks backwards, and often emphasizes negative aspects. Prospective analysis is quite simple to use and within the grasp of all participants in the process. In other words, it can be a democratic methodology.

An additional important feature of this methodology is the immediate feedback of information on the present position or the diagnosis of the school

vis-à-vis the future scenarios portrayed through graphic presentations of the results. The immediate availability of information prevents the loss of group momentum which is usually caused by methodologies in which the knowledge produced reaches the parties concerned long after the diagnostic study has been completed. Moreover, prospective analysis enables the school to construct its own normative model instead of having to accept imposed or imported standards. It is known that a people will be more committed to work for the realization of a future in whose design they collaborated. Furthermore, the methodology gives very strong support to the qualitative aspects, an important factor in the search for transformation of the present situation.

IV. Prospective analysis in Latin American schools of nursing

1. Background

The use of a prospective methodology is not new, although it had not been applied to the health sector until recently. A number of governments have been using it to examine their future possibilities and to create a base for strategic planning.

The systematic use of prospective analysis in the education of health professionals in Latin America began with the publication of the article "Análisis Prospectivo de la Educación Médica" in Educación Médica y Salud (Ferreira, 1986).

In line with the work that PAHO's Health Manpower Development Program has been doing in the application of prospective analysis methodologies in medical, dental, and public health education, a working group was convened in Washington in 1986 to examine the possibilities for applying this methodology in nursing education in Latin America. After a comprehensive discussion, it was decided that the methodology offered many possibilities for orienting the development of the institutions responsible for the education of future nurses.

At the country level, interest has been stimulated in using this analysis in nursing education when nurses have participated in work groups for the application of this methodology in the schools of medicine.

In Uruguay the School of Nursing of the University developed a preliminary nursing adaptation of the document used to apply the methodology in the schools of medicine. In Quito, Ecuador, the Directorate of the Instituto de Pedagogía of the Facultad de Ciencias Médicas of the Universidad Central, in collaboration with the Latin American Associations of Schools of Medicine and Dentistry, promoted a working group of nurses for the purpose of examining the nursing documents produced in Uruguay and Washington, as well as those used in the schools of medicine, dentistry, and public health. They also contributed to the development of a document for nursing.

In February 1987 PAHO appointed a small consultative group to review existing studies and to prepare the documentation necessary for starting the use of prospective analysis in nursing schools in Latin America. These documents were presented to a group of Latin American nurses in May 1987. The resulting document has been tried out in several countries since then. This paper represents the contributions and suggestions of all who have been involved in the process of its elaboration.

## 2. Purpose and objectives of prospective analysis in nursing schools

The introduction of a new methodology to the schools of nursing in Latin America is based on the recognition of the aforementioned advantages. Its purpose is to orient the development plans of schools based on real conditions and the goals of HFA/2000.

The objectives of applying this methodology are:

- To identify the present position of the school vis-à-vis possible future scenarios;
- to prepare an individualized model for the development of the school, which provides for the goals of HFA/2000; and
- to develop proposals for change and identify specific strategies for achieving that desired reality.

## 3. Development of the instrument

### 3.1 Conceptual framework

The consultative group examined existing trends in nursing practice and education and discussed the underlying concepts of a conceptual framework for the preparation of a document for nursing (see Annex 1). With the year 2000

as the focal point, some key components of the contribution of nursing to social change through its involvement in the health sector were identified.

At the end of the discussions a conceptual framework had been constructed which would provide the base for both nursing practice and manpower education in nursing. The most important premises on which there was agreement were as follows:

"Health for All by the Year 2000" is a basic condition which must guide manpower formation in the health field including nursing. This highlights the need for educational processes to be revamped in the schools of nursing in Latin America to maximize the participation of these schools and the countries in achieving the goal set.<sup>(1)</sup>

Primary health care has been adopted as the main strategy in guiding efforts towards HFA/2000, interpreted as "a strategy which confronts health and health problems in a concrete reality and which commits and affects the entire health system and the people it serves. It is part of the core of national health systems and of the complex economic and social development of the community. It requires that health care serve the needs of the population and involve the participation of the community in its planning and implementation. It calls for the efficient and effective utilization of available resources and the recognition of health as a social value which encompasses the economic and social development of the community."<sup>(2)</sup>

Health is regarded as an integral component and not as the result of the general socioeconomic and political development of a population. If progress is to be made toward bringing about far-reaching changes in the health field, practice will have to be the starting point, since the fundamental role which both working conditions and the prevailing models of practice play in shaping the new professional is well recognized. It is necessary to establish a unified base regarding the nature of nursing which serves both practice and theory, using the integration of education and service as the appropriate means for this purpose.



Nursing is envisaged within the circumstances described as a profession that has a specific contribution to make, and that identity facilitates nursing's integration into a multiprofessional team whose goal is to seek Health for All. In this respect, nursing's purpose is fulfilled and its contributions made through actions geared to promote the concept of the individual/group as an integral being with many interrelated facets producing a particular state of health. In putting this concept into practice, the nursing professional performs functions directed at health promotion, disease prevention, and the curative and rehabilitative care of individuals and the community. She realizes a number of roles as she performs her duties: direct care provider, educator, administrator, communicator, investigator, and defender of the rights of the population amongst others. She finds herself in a wide variety of situations often necessitating a broadening of the nursing role in order to respond to specific situations.

Within this context, nursing has a very important social role, not only as a profession but also through the commitment of each professional to a nursing practice which mobilizes his own efforts and those of others, so that Health for All can be sought within an environment of quality and equity with full participation of all involved. If Health for All is to become a reality, social change will be needed in most societies in the world today. Nursing is committed to bringing about this change.

Furthermore, manpower training within the framework of health must follow the kind of planning that produces graduates able to function in today's real-life conditions while at the same time preparing them to assume a relevant role through their commitment to major social change.

In this frame of reference, educational centers are envisaged as assuming a leadership role in society through their functions of education, service, and research, united under the one focus: HFA/2000. Their role must be identified with the development of the profession, of the nursing team, and of the multiprofessional health group for achieving the goals of HFA/2000. For her part, the graduate of the professional school will possess values,

skills, attitudes, and competencies fully identified with nursing and will be able to work with the health team and enter the labor market as an agent for change.

At the same time it is recognized that in the formative institution there are conditions and factors that promote and facilitate institutional development in the direction desired, such as its structure and flexibility, curricular emphasis, access to information, finances, the composition and preparation of the teaching staff, as well as their performances in the practice area and as catalysts in the teaching and learning process.

### 3.2 The objective image

Basing its work on the conceptual framework which had been developed, the PAHO working group produced an objective image of what nursing might be like in the Region of the Americas by the year 2000 (see Annex II). It should be noted that the political and socio-economic setting described is that of Latin America and therefore could require discussion and refinement for application to a specific country and/or institution.

For practical purposes, four categories used in the documents of the other health professions were taken as the organizational basis of the objective image. These four categories are context, structure, function, and integrity. They are derived from the nomenclature used in systems analysis reflecting the internal and external states of a phenomenon. Although they were much discussed and at one time consideration was given to integrating some of them, the categories became clearer and more precisely defined as the work progressed. The result was a successful characterization of the conceptual framework in the objective image.

### 3.3 The instrument (scenarios and variables)

To facilitate application of the methodology in schools of nursing, an instrument has been developed with three possible future scenarios.

The first scenario is constructed on the basis of projections and current trends without major changes, in other words, a progressive development of the existing situation. It is assumed that there will be changes but no developments of major impact are expected to intervene.

The second future scenario is based on the assumption that, during the coming years to the year 2000, the constituents and processes of the system will undergo changes. This scenario allows for the possibility of the advent of completely new elements or the disrupting of existing elements. It is quite possible that this scenario includes elements at different stages of development.

The third scenario is one of major transformations in the health sector. It signals a path of movement and transformation of the integrative elements to reach the stipulated reality.

The purpose has been to portray situations representing three different alternative futures for the present situation. These are only some of the possible options. In the discussions in each school on these options, it is unlikely that any of the scenarios will be found to represent the exact image of what the school would like to achieve. In principle, this is one of the advantages of the methodology, as it forces the school to analyze carefully the implications of each of the scenarios and to discuss the differences between them so as to outline the distinct image desired for its future.

To elaborate each of these scenarios, some key areas were identified, for example, the socio-economic and political situation. Within these key areas elements were extracted from the objective image to describe the scenario at the operational level. Variables/items were chosen that would

most consistently indicate to the school its position vis-à-vis an attainable future. (For example, for the socio-economic and political area, elements such as living conditions, demographic features, and so on were chosen.)

The instrument in its final form is organized according to three future scenarios, each composed of a series of variables which together describe a distinct possible future reality.

Forms for individual and group answers were prepared for the instrument, each having a rating scale to measure the degree of achievement of the institution in relation to each scenario so as to provide more detailed information for discussion and analysis.

#### 4. Application of the instrument

Several phases were identified for the application of the instrument in schools of nursing.

4.1 The preparatory stage: in this stage the school identifies the participants in the process, distributes the document to them, and provides them with orientation on prospective analysis methodology.

It is essential in this stage that a thorough discussion of the concepts involved in the scenarios and their political and historical implications be held so as to maximize the efforts involved. It is also important for the group to reconfirm or develop its own conceptual framework and to compare it with the conceptual framework of the instrument to ascertain whether the instrument might need adaptations as would be necessary, for example, if incompatibilities are found.

The decision to complete the exercise using this methodology means that the school agrees to commit itself to incorporate the results in guiding its efforts to effect changes; any other action would signify a loss of time, energy, and money, and undoubtedly cause frustration among the participants.

The appointment of some facilitators who will be responsible for supervising and monitoring the dynamics of the process will help to guide its development. It is suggested that this document and its objectives should be presented to the largest possible group of persons in the school, and then a work program should be drawn up for carrying out the prospective analysis process. The work program must provide for the time needed for discussion. However, this stage should have definite time constraints established so as not to prolong the process beyond practical limits. It is recommended that the application of prospective analysis from diagnosis through plan of action not extend beyond three months.

4.2 The diagnostic stage: in this stage the school uses the same instrument prepared as a guide for discussion and analysis to identify the actual condition of the school in relation to the scenarios presented.

First, individual replies are sought to the instrument-questionnaire; then the process of prospective analysis is realized in groups. It is advised that for this part of the process, various groups should be established, at most 12 to 15 persons in a group. The groups will be more dynamic, and their discussions will be more fruitful if they are made up of representatives from the various sectors of the school-- professors, students, and administrative staff--and incorporate persons from the service sector and the community as well. The purpose of the group work is to obtain a consensus of the group on the current position of the school vis-à-vis the future scenarios found in the questionnaire. If several groups have been formed, the exercise will have to be repeated to achieve consensus among the groups. It is important to stress the usefulness of this stage if it is properly conducted. Achieving a consensus is always difficult and may be even more so among groups of varied representation as suggested for this methodology, but the results justify the effort. The use of a mathematical average for this purpose wastes the richness of the methodology. Techniques such as brainstorming and Delphi may be mentioned as some that may help in the process of obtaining a group consensus if a simple majority or the unanimous agreement of the participants is difficult to achieve.

Although the instrument has been designed to allow for discrimination in response to foment discussion, a general agreement about the position of the school will suffice at this time without the group having to agree totally on the exact diagnostic position. For example, if, after some discussion, the participants are in general agreement that their school falls in scenario B and there are difficulties in concurring on points 1-3, for analysis and planning purposes the B range will probably be sufficient.

5. Analysis of the results

Before moving to the analysis stage, it is important for the groups to recognize that they have not carried out a simple evaluation exercise, but one to examine the school's present position vis-à-vis the future. This aspect is emphasized in the analysis stage as the school focuses on an examination of the meaning of the results for the future development of the institution.

There are a number of useful methods by which the school can analyze the results of the diagnostic stage, a description of which follows: analysis can be done by scenarios in which the percentages and the number of variables for each of the future scenarios are identified, that is, those that refer to the scenario of limited changes (scenario A), the variables that fall into the category of significant changes (scenario B), and those that indicate that the school has attained the position of transformation (scenario C). This will provide certain information regarding the overall tendencies of the school.

Within the analysis by scenarios, another way to analyze the results is by identifying the variables whose diagnostic situations reflect tendencies in the transformation scenario. It is reasonable to assume that if a school has achieved a measure of development in some variables, it is because it directed its efforts towards these areas. This information is of great value for the construction of the normative model, as it enables the school to compare the elements to which it has been giving priority and decide on whether to continue the pursued policies or to make changes with a view to a more integrated institutional development.

Analysis by profile is done by plotting a graph of the consolidated results of the school (see Fig. 1). There are different ways in which the school can analyze this profile to establish its meaning. One way is to find a line that divides the profile in half. All variables for which the values identified fall to the left of this line could be regarded as being at present in a situation which implies a stable future or a propensity to moderate change, whereas those variables whose values lie to the right of the line are seen as tending towards a situation which leads to social transformation.

The profile provides visual evidence of the overall results of the school's exercise in diagnosis. One is able to scan rapidly the profile and note the different peaks and concentrations of variables in each of the scenarios as well as within each category (context, structure, function, and integrality).

Mini-profiles can also be drawn using the variables which correspond to each of the elements of the conceptual framework, for example, integration, education, and service. This type of analysis has proven to be valuable as it clearly pulls together different items to give a group view of certain important aspects of institutional development. Interesting discussions surface when internal incongruencies within one grouping must be faced.

Each of the variables can be viewed separately to ascertain its position in relation to the future scenarios. One way that some institutions have applied in the examination of individual variables has been to establish a critical point for each variable in the three change scenarios. The critical point identifies the level of development or tendency to change that the school considers minimally acceptable at the present time. The critical points for the variables are determined on the basis of the values of the school itself. Establishing a critical point for each variable allows the school to particularize its analysis, give greater weight to certain priority variables, and to assign more advanced critical points where tendencies to change or transformation already exist. This also recognizes that not all the elements (variables) are at the same stage of development in a school. In its

analysis, the school compares its situation as identified in the diagnostic stage with the one it has identified as the critical point for each variable. If the variable is diagnosed as showing less tendency to change than that identified as the critical point, it could be considered as a priority in the institution's future development. To illustrate: the school defines the critical point or acceptable level of change for the "research" variable (Structure No. 21) as in scenario B3 and it was diagnosed as being in scenario A2, from which it can be concluded that research will have to be regarded as a priority when the normative model is constructed.





The objective of the analysis stage is the identification of priority areas and elements which are both essential for institutional development and needed for the fulfillment of the school's commitment to the transformation of the social and health situation.

6. The normative model

The next stage is based on the the results of the analysis. This is the establishment of the normative model. Using the instrument with the three scenarios described and the points identified as priorities for development in the analysis stage, the school develops a model of what it wishes to achieve in a given future (for example, the year 2000). The scenarios of the instrument make it easy for the group to be able to compare a number of images, discuss their differences and possible implications, and even have an idea of the extent of change necessary to achieve their goals based on the previous diagnosis. Using the critical points identified and the knowledge of the specific situation it reflects, the school decides on a possible and attainable scenario. This is a creative stage, and the discussions are sources of enrichment. As participants establish what they believe can be realized in institutional development and as they examine the implications for the school and society, a distinct individual model begins to emerge. Care will have to be taken to prevent the group from confining itself to mathematical projections or cause-and-effect situations and to stimulate thinking that leads to new knowlege, tactics, and possibilities.

It is important to stress once more the need for a real consensus on the definition of the model. The use of a mathematical average to derive the goal is not appropriate in the the diagnostic stage and even less so in the construction of the normative model, since to seek a mathematical average means that each member of the group maintains his original position, and the model becomes something fictitious to which no one is committed.

At the end of this process the school's own image for the future has been established. It has been called normative because it sets norms for the

institutional development in the coming years. Having established its own norms stimulates the school to commit itself to achieving these aims.

7. The transformation stage

This is the stage of implementation and transformation. Through the establishment of a plan of action and the identification of strategies for its implementation, the school consolidates its commitment to its normative model. The individual nature of each situation is brought out even further with the implementation of activities to produce the desired changes.

The action plan must be explicit and must offer alternatives for achieving the proposal, thus taking into account the fact that change is part of the process and making it possible for the plan to proceed even if the situation is a changing one.

To give an example, the school takes into account the worsening economic crisis and proposes strategies for seeking extrabudgetary financing. One strategy might be the development of agreements or the execution of interinstitutional projects locally and internationally which would enhance implementation of the school's plans. However, at the same time, the school is aware of the economic constraints and seeks a number of ways to maximize the use of resources during the period for which plans are being developed.

There are a series of factors that must be considered at this stage. Insofar as it is possible, it is important to anticipate constraints, crisis situations, and the problems that could obstruct the process. The resources needed and the chances of securing them must be analyzed in terms of their feasibility before committing to any strategy.

As in any process requiring change, it is necessary to have the power to make arrangements for administrative and political support for such purposes. In implementing strategic planning, each institution will seek to particularize its projects according to its priorities, possibilities, and

resources and will often bring into the process other specific techniques and methodologies which complement the achievements of prospective analysis.

It is necessary to guard against the tendency to view this planning narrowly either from a very short or a very long-term perspective. If only the immediate future is considered in planning, creativity can be limited due to the fact that present constraints are so obvious. Conversely, if only long-term gains are emphasized, planning may be too general and of no use as a guide for establishing particular and concrete strategies.

Finally, it must be stressed that the solution offered for institutional development through prospective analysis is not static or an absolute norm. It is a work plan that must have direction and must be flexible. Change being an integral part of life, readjustments and even new approaches may be necessary. Prospective analysis as a methodology does not end at this point but becomes part of a cycle that must continue to be future-oriented. The exercise--preparatory and diagnostic phases, analysis and the creation of a normative model, planning and implementation--must be repeated as often as necessary, at least every two to three years in order to maintain its prospective character and to provide information on the effectiveness of the measures adopted.

#### REFERENCES

1. World Health Organization. Alma Ata 1978: Primary health care. Geneva, 1978.
2. Organización Panamericana de la Salud. Elementos para el Marco Conceptual de Atención Primaria en Salud. Unpublished work. Washington, D.C., 1987.

BIBLIOGRAPHY

Prospective Analysis

- Decoulfé, A.C.: La Prospectiva. Barcelona OIKOS-Tau S.A., 1974.
- Ferreira, J.R.: Análisis prospectivo en la educación médica. Educación Médica y Salud 20:1(26-42), 1976.
- Serrano, M.M.: La planificación social prospectiva. Comercio Externo 28:4(434-443), 1978.
- Luna, R.: Análisis prospectivo de la educación médica y los escenarios como metodología. Unpublished work. PAHO - Washington, D.C. 1987
- World Health Organization. Health Projections in Europe. Methods and Applications. Geneva, 1986
- Análisis prospectivo de la escuela de salud pública -- I Etapa. Caracas, Universidad Central de Venezuela, 1986.

Integration of Teaching and Services

- Vidal, C.A. y Quiñones, J.: Integración docente-asistencial. Educación Médica y Salud 20(1-25).
- Integración docente-asistencial. Unpublished work. Report on the Seminar held in in Brasilia. 1976
- Manfredi, M. : Articulación docencia-asistencia e investigación y la calidad de la atención de enfermería. Unpublished work presented at the National Congress of Colombian Nurses. 1984.

- Rodriguez, M.I.: La Planificación Educativa y los Nuevos Modelos de Formación de Personal de Salud: El Proceso de Integración Docente-Asistencial. Unpublished work presented at a workshop Tachira, Venezuela.

#### Primary Care

- World Health Organization. Alma Ata 1978: Primary Health Care. Geneva, 1978.

- Organización Panamericana de la Salud. Elementos para el Marco Conceptual de Atención Primaria en Salud. Unpublished work. Washington, D.C., 1987.

- Organización Panamericana de la Salud. The role of the nurse in primary health care. Scientific Publication No. 348. Washington, D.C., 1977.

#### Nursing

- Mejía, A.: Educación continua. Educación Médica y Salud 20(43-71).

- Barrows, H.S. y Tamblyn, R.M.: Problem Based Learning: An Approach to Medical Education. Springer Publishing Co., New York, 1980.

- Verderese, O.: Análisis de la enfermería en América Latina. Educación Médica y Salud. 13:4(315-340).

- Organización Panamericana de la Salud. Resultados preliminares de la investigación sobre la práctica de la enfermería en seis países de América Latina. Unpublished work. Washington, D.C., 1985.

- Souza, A.: Cuarenta años de cooperación técnica de OPS en enfermería y algunas notaciones sobre educación en enfermería.

- Organización Panamericana de la Salud. Grupo de Trabajo sobre Lineamientos Generales de Investigación y Proyecto de Estudios de la Práctica de Enfermería - Informe Final. Serie de Desarrollo de Recursos Humanos 63. Washington, D.C., 1985.

Epidemiological Approach

- Usos y Perspectivas de la Epidemiología. Publicación No. PNSP84-47, OPS, Washington, D.C., 1984.

- Castellanos, P.L.: Introducción a la Epidemiología como abordaje integral del proceso salud-enfermedad en poblaciones humanas. Centro de Investigaciones y estudios de la salud, Ministerio de Salud, Nicaragua, 1983.

Others

- World Health Organization. Research for the reorientation of national health systems. Technical report series No 694. Geneva, 1983.
- MacPherson, K.I.: Health Care Policy, values and nursing. Advances in Nursing Science 9:3(1-11), 1987.

ANNEX I

ANALYSIS OF TRENDS IN NURSING IN LATIN AMERICA



ANNEX I

ANALYSIS OF TRENDS IN NURSING IN LATIN AMERICA

I. Nursing practice

Though they constitute more than half the health work force (55%) and are mainly responsible for the majority of health services delivered to the population, most nursing personnel have little or no training for the work they do. The professional nurses who are the heads of nursing teams represent only 10 to 20% of this personnel. As a result of this situation, they must give more of their time to the planning of nursing activities, to their duties as the heads or supervisors of their service units, and to participating in the training of auxiliary personnel.

Since the forties, nurses have been found predominantly in hospitals; their professional autonomy is limited and nursing practice remains by and large subordinated to medical practice. The doctor stands out as the chief producer and therefore holds technical and administrative control of the work process in the health sector.

The technical division of labor is almost always influenced by other than purely technical factors, such as the tradition and prestige of certain professions. In recent decades nurses have achieved professional status but have not yet become autonomous and are still being underused and even misused.

Over the past decade, with the introduction of new health policies and the adoption of the strategy of primary health care, nurses have become aware that the current model of service delivery, as well as the role of nursing, must be changed.

The trends identified in the practice and utilization of nurses can be summarized as follows:

1. As a strategy, primary health care requires nurses to shoulder new responsibilities, such as the diagnosis and treatment of common diseases with predictable courses and the monitoring of geriatric patients and those in treatment for chronic diseases in addition to their existing activities in health promotion, in well-baby control, with pregnant women and those in the puerperium, and in delivery care;
2. The number of nurses has apparently increased. However, population needs are not being met because demand from the service sector for personnel is limited. This gives rise to problems of unemployment and underemployment;
3. Although more community nurses are needed, the hospital continues to be the main source of employment;
4. The technological development of highly complex hospitals has been an impetus to the involvement of a small group of nurses in the care of patients undergoing sophisticated and technologically complex treatment and an incentive to them to set up private practice;
5. New areas of employment have emerged such as the occupational health units of companies, daycare centers, etc. However, the majority of jobs created are generally for auxiliary personnel, without considering the need to establish posts for professionals;
6. The tight labor market is leading to the hiring of nurses under special conditions (temporary contracts), without the advantages and safeguards stipulated in labor laws. The problems of low pay and long working hours persist;
7. Despite awareness of the need to keep nursing personnel abreast of developments in the health care area in order to improve the quality of care, the opportunities are few and often, those programs available do not respond to the needs. This may be correlated to a lack of research facilities which provide information on new trends and make continuing education programs responsive to actual conditions in the nursing profession;

8. The social function of the nurse is distorted. She is far removed from the individual, the family and the community and in this respect has been replaced by less qualified personnel. In her work she gives special emphasis to lower-level administration, where she participates infrequently in decision-making or education;

9. The use of nursing practice models which do not adapt to the Latin American context is increasing owing at least partly to a paucity of research related to actual conditions;

10. Nurses are not claiming their leadership role, thereby eliminating their place at decision-making levels and deteriorating the part they play in health practice;

11. Nurses in education are still removed from the real world of services despite isolated efforts to integrate education and services;

12. There is still a shortage of nursing research on high-priority health topics.

## II. Nursing education

In the last two decades the number of schools of nursing in Latin America has increased steadily. It has been noted that, although the conceptual frameworks used in the schools of nursing emphasize practical experiences, in reality conditions, as well as the early introduction of the student to clinical areas and the community, their curricula follow traditional models for the education of health personnel.

Moreover, the dominance of the hospital sector causes the learning experience to reflect the system in use, minimizing experience in other areas and levels of care.

Trends:

1. Increased enrollment not, however, accompanied by an institutional development that will assure the quality of manpower training;
2. The incorporation of schools of nursing into the university, requiring the training of teachers and the earning of academic degrees;
3. The unification of nursing education at just one professional level;
4. The education of nurses separate from that of other professions and sectors;
5. Training in basic pedagogy and in specialized areas is seen as a priority need by teachers; however, it lacks consistent political, administrative, and financial support;
6. Very little generation of knowledge through research despite the teaching of research as a subject in basic education;
7. Curriculum revisions in response to new health and education policies, particularly primary care, the integration of education and service, and emphasis on the different levels of care;
8. Greater emphasis on community health with practical work in rural communities and with high-risk groups, such as those exposed to biological and social risks;
9. Curricula make no provision for new nursing functions in anticipation of community needs in the immediate future;
10. Inclusion of scientific methods in basic nursing education;
11. Incorporation of educational technology throughout the curriculum, although often with little understanding as to how to use it;

12. Simulation laboratories being misused for situations in which the real world provides better learning opportunities;
13. Students participating in evaluations;
14. Tutorial relationships with students which inhibit the development of their initiative and critical judgement.

ANNEX II

OBJECTIVE IMAGE OF NURSING IN THE YEAR 2000

ANNEX II

OBJECTIVE IMAGE OF NURSING IN THE YEAR 2000

Context

In seeking to guarantee equity in their systems, governments have been promoting the redistribution of national wealth and encouraging the execution of public interest projects in the economic and social sector which ensure the fulfillment of the goals which society has set for itself as a whole. The government recognizes the population's right to health and accepts the responsibility for realizing the proposal of HFA/2000 through consistent policies, especially in the fiscal health and social sectors.

In keeping with policy decisions which promote the social sector, a transformation is being implemented in the educational system. This transformation favors the expansion of the system. It encourages a balance between the natural and social sciences in the curriculum and gives individuals a broader frame of reference that embraces political and socio-economic issues in a problem analysis framework.

Scientific and technological policies recognize the potential for social impact provided by quality research in health and emphasize, in addition, the need for technological self-sufficiency. High priority is assigned therefore to the development of a policy on health research which fully involves the universities and emphasizes technological surveillance for the sector.

Health care policies advocate the expansion of health care services by extending the three levels of health care. It contains a strategic primary care approach with greater autonomy for the nursing profession, the expansion of the traditional role of nurses, the development of their emerging roles, and the adoption of a policy of full employment.

Manpower development policy as part of the health sector takes into account the necessary quantity and quality of health manpower, in addition to interrelated areas outside the sector. It enunciates the changes necessary and provides the means for putting these into effect. It envisages autonomy for the nursing profession and supports its participation in the planning and structuring of the health services.

The health sector and manpower training institutions will have adequate funds to play their part in attaining the goal of HFA/2000.

The nursing education institution is aware of local political and socio-economic conditions in terms of its institutional responsibilities and of its orientation of the educational process.

#### Organization of knowledge, the school, and services

- The school of nursing participates in solving the health problems of the population through the formation of nurses with an adequate scientific foundation, through the generation of knowledge, through participation in the planning and operation of services, and through the search for new models of practice.

- The school is organized to participate in meeting the health needs of the population utilizing the mechanism of the integration of education and service. It has formulated a theoretical framework, based on relevant theories and concepts which orients its programs and defines its role in dealing with socio-political and economic conditions.

- The structure of the school is oriented more towards the nature of the process of health and illness than to a reflection of the traditional fragmentation of disciplines. It provides the flexibility necessary to adapt to the needs of society and those of health services. Knowledge is organized so as to facilitate continuity and comprehensiveness while allowing curricular flexibility.



- The structure of the school is conducive to a sound scientific training in social and health issues, and to the development of a clear concept of the role of nursing both in relation to health and to the other professions involved in this area. Scientific and technological issues, and research, especially in the areas of nursing practice service conditions and epidemiology are emphasized.

The school participates in the establishment of formal mechanisms of interinstitutional linkage for policy formulation, in the planning and operation of health services as well as education, and in ensuring consistency between the teaching program and the organization of services.

Curriculum models are based on nursing processes and on primary health care, with epidemiology as an integrative focus. The curriculum emphasizes health education, primarily understood to be a process for facilitating the organization of the community so that the people can exercise their rights to health.

The school has personnel with philosophical, technical, and pedagogic training for creative work.

Based on the integration of education and service, the school participates in health services, establishing a base within the population which permits its developing a broad range of experiences reflective of the reality of the community's health.

#### Development of the educational process

The approach to health problems is comprehensive, the emphasis being on promotion and prevention. It includes individual and community efforts and stresses those community efforts which have the greatest impact.

The school inculcates in students an identification with nursing, including an awareness of themselves as members of a profession in addition to knowledge of relevant legal aspects.

The representatives of the school demonstrate leadership aspects, such as decision-making and the acceptance of responsibilities. At an early stage students are introduced to the use of research and analytical methods in their work.

The incorporation and utilization of information reflects its crucial place in the rational application of knowledge.

The school provides access to health information through both pooled international reference systems and local sources (on issues that are relevant to the population's health).

Practice is essentially through learning and doing. Students are involved in practice early by means of their participation in programs and activities at all levels of care.

Education of students is through integrated work within multiprofessional teams. Practice is also provided for their development as leaders of nursing teams.

The school evaluates health programs and activities on the basis of their social impact and the effectiveness, efficiency, and equity of the services provided.

The educational programs place emphasis on learning over teaching and on the search for new teaching models, utilizing educational research for the continuing improvement of the teaching-learning process.

The relationship between the teacher and student makes the teacher the facilitator of the learning process, and the student an active participant in his own transformation.

Teaching methodologies are used which emphasize leadership skills, such as independent study and applied research.

Evaluation models emphasize new concepts in nursing and in the teaching-learning process.

The school carries out a continuing education program for its personnel which emphasizes nursing, teaching-learning, the integration of education and service, and health education.

ANNEX III

I N S T R U M E N T

1. DEFINITIONS

Primary Health Care

Is a strategy for dealing with health and health problems in a specific setting which involves and affects the entire health system and the population it serves. It is part of the core of the national health system and is a component of the economic and social development of the community. It requires health care to be related to the needs of the population, to community participation in its planning and implementation, to the efficient and effective utilization of available resources, and to the recognition of health as a social value which encompasses the economic and social development of the community.

Context

Is the general environment in which nursing schools are found. Its influence embraces effects on the school in terms of its institutional role and the effects to be observed on school programs.

Scenario

Is the set of hypotheses related to selected variables which describes a situation that may occur in the future.

School

Is the institution responsible for forming nursing personnel, whether it be department, faculty, or school in name/structure.

Structure

Includes the internal and external organization of the school. Internally it refers to the organization of curriculum and administration; externally to the school's organization in relation to the environment in which it is found.

Function

Refers to the efforts of the school to achieve its goals.

Objective image

Is the description of the picture of what nursing might be like in the year 2000 if it were able to maximize its potential in contributing to HFA/2000.

Integration of education-service

A process of increasing linkages between educational institutions and the health services to: improve health care, guide the production of knowledge and personnel formation. The epidemiologic profile of a specific population and region is used as the basis and the continuity of the educational process (the process of continuing education) that is initiated in the work setting and is capable of transforming it, is another important element.

Integrity

Is the interrelationship of the three components--context, structure, and function--which allows the institution to respond as a whole to society. It can be visualized through its efforts as an institution and those of its graduates.

Normative model

Is a scenario of goals or a proposal for change drawn up by the school that describes the school's desired and attainable future within a specified period. The normative model is different for each school since it takes into account the particular needs, priorities, possibilities, and resources of that institution.

Variables

Are important elements chosen to make explicit and represent the characteristics of the situation under study.

## HEALTH AND NURSING SITUATION IN THE YEAR 2000

### C O N T E X T

#### Scenario A.- Stable Sit.

##### 1. Socioeconomic situation

The school recognizes the influence of socioeconomic factors on health conditions and incorporates these factors in separate and complementary/supportive subjects. Little emphasis is shown throughout the nursing courses.

##### 2. Population characteristics

The school deals with demographic information without establishing its relationship with nursing practice.

##### 3. Health situation

The school takes into account the health situation in the country/region so as to identify some aspects regarding morbidity and mortality to be included in the curriculum.

##### 4. Health policy

The school includes health goals and policies as theoretical subjects but there is no corresponding emphasis in practice.

##### 5. Organization of the health system

The school prepares nurses on the basis of the organization of health systems accepting as the norm the predominant role of nursing within the systems.

##### 6. Primary health care

Primary health care is mentioned as a health care strategy for achieving the goals of HFA/2000. Some students gain practical experience through the implementation of specific projects.

#### Scenario B.- Moderate Changes

The school recognizes the influence of socioeconomic factors on health conditions. It integrates this information within the nursing courses in those areas where socioeconomic influences have a marked impact on health (eg., maternal and child and community nursing).

The school recognizes the importance of demographic information in nursing subjects and considers it an influential factor in the health situation.

The school takes into account the health situation in the country/region, and the curriculum demonstrates its relevance to this situation.

The school recognizes the importance of health policies and establishes a close relationship between these policies and the composition and orientation of the curriculum.

The school takes into account several models of health systems organization and analyzes the role of nursing in terms of its contribution to the effectiveness of the systems.

The school emphasizes primary health care as a strategy for attaining the goals of HFA/2000 through curriculum development. It seeks to provide students with some experience in implementing this strategy.

#### Scenario C.- Imaginative and Attainable through Transformation.

The influence of socioeconomic factors on health forms an integrative focus in the curriculum, which is demonstrated throughout theory and practice.

The school takes into account demographic information including projections in the orientation of the total curriculum.

The school takes into account the health situation and establishes policies which guide their activities, closely relating them to current and anticipated health problems of the population.

Throughout the development of its curriculum, the school provides for the discussion of strategies for achieving the goals included in the health policies.

The school examines a number of alternative models of health systems organization and promotes, through its curriculum orientation, critical analysis of the role of nurses in the transformation of these systems.

The school gives priority to providing experiences in those service units that use primary health care as a strategy for achieving the goals of HFA/2000 and encourages a change of orientation in the service units that do not implement this



### Manpower development policy

7. Only estimates of the present number of nursing personnel in the various categories are available, and curricula need to be evaluated to confirm their appropriateness to manpower development policy.

8. Policies for manpower training in nursing are determined with little or very limited participation of nurses from either the service or educational sector.

9. The school accepts decisions on annual enrollment from the institution to which it is attached (e.g. university, ministry) and has little say in the decision-making.

### 10. Social basis of nursing practice

The conditions of nursing practice which facilitate and assure the full practice of the profession are considered the responsibility of the individual employing institutions and thus out of the school's jurisdiction.

### 11. Criteria for admission of students

The previous education of the student is taken into account, and the number of years of education and academic performance are established as entry requirements.

There are data on the number and category of available personnel, and the school uses the data to establish different curricula. It is necessary to define the functions of the different categories for a more rational allocation of nursing resources.

Policies for manpower training in nursing are decided by groups made up of nurses and other representatives through formal and informal mechanisms. However, its relationship with a general manpower training policy in the health field is weak.

The school is involved in the planning for annual enrollment, based on the projections of population needs, health policies, and employment opportunities.

The curriculum deals with working conditions which facilitate and assure the full practice of the profession and emphasizes this issue in the practice of administration.

The school attaches importance to background in biological and social sciences and to certain abilities, such as reading and communication, taking them into account in its conditions for admission.

The school knows the number of personnel in and the nursing functions of the different categories. Curricula are established which correspond to the identified needs and competencies required.

Policies for manpower training in nursing are integrated into a general health manpower training policy which is formulated through formal mechanisms which include the participation of nurses who represent different areas of practice.

The school plans annual enrollment according to population needs, health and employment policies, and the demand for professional nurses. It is actively involved in the search for mechanisms to bring demand into line with the population's health needs.

Throughout its curriculum, the school takes into account the utilization of patterns in nursing manpower and other employment conditions which facilitate and assure the full exercise of the nursing role.

In admitting students to the university, the school takes into account the student's background in social sciences, natural sciences and the humanities through admissions criteria that include an assessment of competencies in addition to academic performance. The school has designed mechanisms to facilitate the development of these abilities in students who do not have these required qualifications.

## STRUCTURE

### Organization of the school - Administration of knowledge

12. The structure of the school is compartmentalized so that the different health professions are independent. Integration is sporadic and informal.

13. The school is organized through isolated disciplines under the responsibility of independent courses/ departments.

14. The structure of the curriculum reflects little integration, therefore atomizing and repeating a good deal of material.

15. In the structure of the curriculum the basic unit of study focuses only on the individual.

16. Program activities are based on objectives which contain clear definitions of the minimum competencies of graduates.

### Relationship with the organization of health services

17. The organization of the school bears no relationship to the organization of the health services.

18. In establishing a population base on which to organize its programs, the school has access to and utilizes a limited number of services, a factor limiting the development of these programs.

The structure of the school provides mechanisms for students to carry out activities in combination with those of other health professions through specific coordination efforts.

The school is organized by departments that combine different disciplines and subjects.

The curriculum is structured to allow horizontal and vertical linkages. This is more the case for nursing subjects since in the other subjects the situation depends on the willingness of other departments to cooperate.

In the structure of the curriculum the basic unit of study is geared essentially towards the individual, although the family unit and certain specific community groups are incorporated.

In some areas of nursing, program activities are guided by objectives which establish the competencies of graduates for that specific nursing area.

The organization of the school is related to the organization of health services through committees and interest groups.

The school utilizes a variety of services to develop an organizational base for its programs, thus ensuring an adequate population base.

The structure of the school includes as an integral component learning activities in multiprofessional teams.

The school is organized to facilitate the integration of diverse areas in the different units.

The structure of the curriculum is geared to health processes. It requires not only the integration of different areas of knowledge but also the presentation of that knowledge in logical sequence, incorporating the latest developments.

In the structure of the curriculum the basic unit of study deals principally with community health.

Program activities are based on objectives which specify the competencies of the occupational profile of graduates, emphasizing the contribution of nursing through problem-solving for the attainment of the goals of HFA/2000.

The organization of the school provides various mechanisms, such as formal agreements, which ensure a close relationship with the organization of health services.

The school utilizes for its programs a variety of services that together constitute a broad population and organizational base and represent the components of an integrated health system.

### Structural flexibility

19. The school has committees to review changes needed, which are usually limited to aspects of the curriculum.

The school promotes changes through structural reorganization while seeking institutional integration.

In the school, organizational units facilitate and generate change processes consonant with needs.

20. The school is organized in such a way that long periods of time are required for curriculum adjustments.

The school has mechanisms for making changes in the curriculum that permit adjustments to be made in each subject in a short period of time.

The school has supple and dynamic mechanisms that produce a smooth and orderly procedure for keeping the curriculum up to date.

### 21. Research

The organization of the school demonstrates low priority in research. When provision is made for research, this is done in isolation from services and teaching.

The organization of the school demonstrates the need for research. It provides the means for the development of research, but research is maintained separate from services and education.

The organization of the school regards research to be of fundamental importance in the educational process. Research is brought into the theoretical and practical structure of the curriculum.

### Administrative support

22. The structure of the school only promotes coordination between the administrative and educational activities in a few instances. The development of administration and teaching is realized in a manner broadly independent of each other.

The structure of the school facilitates coordination between administrative and educational activities, the two areas remaining separate in their structures.

The school uses an administrative structure which gives priority to education, services, and research.

23. In the preparation and administration of the budget, the school of nursing is seldom involved in financial decisions on planning and administration.

The budget is prepared by nursing authorities but they have limited access to the decision-making about its adoption and administration.

The school of nursing prepares the budget, participates in decisions on it and administers it.

### 24. Library facilities

The school has a small library and has no budget for its maintenance. Information is largely available through books. There are few journals and those available are often inadequate from the standpoint of their relevance to the curriculum content and of the language of publication.

The school has a library with an adequate and diverse collection of books related to the curriculum. There are some Latin American journals. Budgetary provision is made for the maintenance of the library. The library's reference system is limited to the school's library.

The school has a library with a collection of books of adequate size and quality, in addition to non-traditional materials. There are Latin American and other journals containing information relevant to the development of school programs. There is a reference system which gives access to bibliographical information from outside the school.

### Structure of teaching staff

25. In setting criteria for selecting staff, the school attaches little importance to specialization and/or professional experience in specific areas.

The school has set criteria for selecting teachers that include scientific and technical training and/or experience in their clinical area.

The selection criteria for teachers include scientific and technical training and/or experience in their clinical area. Research skills are also required.

26. The teaching staff is made up of personnel with little direct involvement in services once they are appointed at the school.

With the support of the school, the teaching staff is made up of nurses who continue to practice nursing after they have been appointed to the faculty. This

The teaching staff is fully involved in nursing practice through various mechanisms all of which involve some measure of integration of education-

## F U N C T I O N

### Relationship between theory and practice

27. The theoretical content follows a pre-established program. The practical experiences bear little relationship to theory.

28. The emphasis on the educational processes of teaching and learning occurs mainly in the classroom. Little teaching is visible during practical experiences.

29. The school selects some service units for the training of students on the basis of the level of their technological development, priority being given to highly developed services that do not necessarily appropriately respond to the overall conditions in the country.

30. Learning experiences are undertaken primarily in institutions that provide health care at the secondary and tertiary levels. However, this type of planning does not reflect the real picture of the population's health problems.

31. The participation of service personnel in teaching and learning is minimal or tangential to curriculum development.

### Methodology

32. The teachers use previously established methods and approaches to transmit knowledge. This leads to training by rote.

Because of separate planning, the relationship between theory and practice is achieved only through mechanisms of coordination.

The teaching-learning process occurs in the classroom and throughout practical experiences, although the emphasis of the two is often different.

The school curriculum reflects a critical examination of technological development. In selecting experiences for students, the school takes into account the appropriate use of technology but gives little priority to this element.

Learning experiences are planned on the basis of the general health situation of the population in the country/region. For this purpose, the school uses existing health institutions with their three levels of care.

Service personnel participate with educators in identifying health problems and the areas of emphasis for curriculum development. Some are involved in classroom teaching.

In some courses the teachers use methods that encourage students to develop critical and analytical skills.

The theoretical and practical components of the curriculum are integrated and have a single programmatic basis.

The teaching-learning process is based on a variety of situations, with a true integration of focus for both emphasis and content.

The school takes into account and participates in the critical examination of technological development in the services, assessing to what extent they use and produce technology appropriate to their needs. It makes the rational use of technology a condition for placing its students in services units.

Learning experiences are considered as part of the integration of education and service, which advocates coverage of the population in a specific area by providing the three levels of health care and using epidemiology and the primary care strategy (optimum use of resources) as integrative approaches.

Service personnel are fully involved in the different areas of curriculum development and implementation.

The teaching staff incorporates educational methods and approaches into its programs that enable the student to develop critical and analytical skills in relation to the contents of the program and the practice of their profession.

33. The school uses a variety of essential educational materials produced in more developed environments which are not appropriate to existing conditions.

#### Evaluation

34. Curriculum evaluation is carried out only as part of an administrative requirement but the findings are not used to make changes in the curriculum.

35. Student evaluation is on an individual basis and measures almost exclusively the capacity to repeat theory with little or no emphasis on practice.

#### Continuing education

36. Continuing education for teachers reflects their own efforts to satisfy their special interests. The school supports these efforts by granting leave and paying salaries but does not initiate or encourage such training.

37. The school has only a few teachers trained in educational techniques. Such training is the result of the personal interest of the teacher and is not a requirement of the school.

38. Continuing education programs are infrequent and addressed exclusively to nursing professionals.

#### Production of scientific knowledge

39. Research is the result of the special interests of the researchers. The school has not established priority research areas.

The school examines and adapts some essential educational materials produced in different environments. The school's own production is minimal.

Some courses or departments carry out evaluations and try to improve subjects/ areas without affecting the curriculum as a whole.

Student evaluation measures equally the acquisition of attitudes and knowledge, the level of abstract thinking, and the capacity for analysis, as well as practical skills.

Continuing education has clear objectives and is part of a well-defined program to upgrade technical knowledge in areas specifically related to the teaching-learning process.

The school facilitates teacher training and provides opportunities and establishes continuing education programs for the teaching staff.

The school has developed a formal continuing education program for nursing professionals, and some courses are open to other professionals.

Some units of the school have defined research areas based on their clinical areas or dependent on the possibilities of budgetary allocations.

The school identifies the needs for educational materials. It seeks the materials from existing supplies. It prepares or coordinates the production of the materials.

With the participation of all those involved in the teaching-learning process, the school evaluates the educational process and monitors its graduates on a continuing basis. This evaluation forms an important base of changes in the curriculum.

The school favors self-evaluation by student and teacher, emphasizing analytical capacity and problem solving. In the same light, it evaluates clinical practice and orientation to social needs.

Subjects for continuing education are based on needs identified by the school, by professional groups, and by services. They fit into a framework of permanent learning.

The school has an ongoing training program for its personnel, thus making it easier for the teaching staff to apply the principles and techniques related to the educational processes that have been selected by the school as important.

The school has a continuing education system which is conducive to the development of knowledge and to the transformation of existing conditions. Multiprofessional groups are incorporated into the realization of certain programs.

The school defines lines of research in accordance with the requirements of the health care systems, the educational process, needs of the population and needs for effective nursing care practice.

40. When research is carried out, it is done sporadically and is not formally incorporated into the programs.

41. The school publishes few studies, usually monographs, to disseminate its work in education-service and research.

#### Budgetary allocations

42. The school budget limits the school to educational functions and even these are somewhat restricted.

43. The school makes little effort to secure extrabudgetary funds for a variety of reasons: lack of access, information, and so on.

Research is a formal part of the curriculum. It is carried out at several levels with the emphasis on biological and pathophysiological research.

The school puts out a publication from time to time to disseminate its work on education-service and research.

The school budget permits the school to perform its functions, giving priority to education and service and in some cases to the interests of certain departments.

The school makes an effort from time to time to secure extrabudgetary funds, usually locally and through the efforts of a member of the teaching staff.

Research is a basis for programming. The emphasis is on social and epidemiologic research, although other types of research are accommodated.

The school regularly publishes a periodical to disseminate its work in education-service and research.

The school budget provides for research and education and service, as well as for extension activities, reflecting a commitment to activities that respond to the health needs of the population.

The school has the capacity and mechanisms to generate its own resources (advisory services, projects and other means), with a significant impact in relation to its total budget.

## I N T E G R I T Y

### Scenario A - Stable Sit.

#### Conceptual framework (guidelines for institutional development)

44. The teachers are governed by their own value systems, even though the school has standardized the philosophy of nursing to be applied to curriculum development. As a result, the impact of this philosophy can hardly be noted in the activities of the school.

45. The school has developed a conceptual framework in nursing in line with the actual health conditions in the country, but its influence on curriculum programming is limited.

46. The school uses theories and techniques that are in harmony with certain models of care and nursing education but does not adapt them to conditions in the country.

47. The approach to nursing care in the school is essentially biological and pathological including some psychosocial factors but with little emphasis placed on social issues.

48. The school sees primary health care as the extension of coverage to remote areas.

49. The school confines itself to preparing health manpower on the assumption that it will participate in the country's development process.

### Scenario B - Moderate Changes

The teachers have defined the philosophical framework to be followed. There is still little elaboration of this framework in conjunction with student representatives, graduates, and service personnel. It is only sporadically revised; however, it does achieve the setting of guidelines for developing teaching aspects.

The school has developed a conceptual framework in line with the social and health conditions in the country. This is reflected more in theory than in overall programming.

The school recognizes the need for critical studies on the theories and techniques used but has not developed mechanisms to do this.

The school examines nursing care from a biopsychosocial approach, but there are areas in which it gives greater emphasis to one of the three aspects.

The school incorporates the primary health care approach as a strategy, through the work of its teachers, personnel, and students, in the primary and secondary levels of health care.

The school identifies its efforts in manpower production with the country's development process. Its response is more limited in the areas of services and research.

### Scenario C - Imaginative and Attainable through Transformation

The school's teaching staff, in conjunction with members of student groups, graduates, and service personnel, determines the philosophical framework that underpins all institutional activities. This framework is redefined periodically as the situation demands.

School programs are based on a valid and actualized conceptual framework which reflects social and health conditions. This is reflected in all of the school's activities.

The school critically examines current nursing theories and techniques and their relevance to nursing's contribution to national development.

The school examines nursing care from a biopsychosocial approach, and this is demonstrated in all its activities.

The school defines primary health care as an integral part of its philosophical and conceptual framework, and so its teachers, personnel, and students participate directly in the implementation of this strategy in all the levels of care: primary, secondary and tertiary.

The school, through its functions of teaching, providing services and conducting research, assumes a leadership role in promoting, stimulating, and catalyzing the transformation of the health situation. It uses various means of participating in the process of social change.

50. The school participates with the services in the planning and evaluation of the health system only when requested.

51. The school only participates in the delivery of health services through student practice. It has little contact with graduates for the purpose of improving nursing care.

52. The school addresses its functions through a primarily curative approach to care. It does not give priority to preventive activities or to health education.

53. The school participates very little in the training of auxiliary personnel.

54. The school of nursing prepares the nurse for a position in the nursing team and gives limited consideration to her role in a multiprofessional team.

55. In teaching, the school utilizes the findings of research undertaken by different health professionals; however, its own research activities are minimal.

56. Through its teachers, students, and graduates, the school participates in discussions (e.g. scientific meetings) that tend to define the functions and bases of the profession.

57. The school pays little attention to issues concerning the profession's working conditions, either in the theoretical or practical part of the curriculum.

The school is represented on coordination committees for the planning and evaluation of the health system.

The school, through its teachers and students, contributes to changes in orientation in the services. There are mechanisms for follow-up of graduates and for incorporating them in this process.

In the functioning of the school, emphasis is placed on the role of nursing geared to health promotion and disease prevention. In practice, this is only achieved with the individuals who come to seek care in the established health service systems.

The school is represented on the governing bodies of training centers for auxiliaries.

The school of nursing sees the nurse as an independent professional and a member of a multiprofessional team. This view is implemented through the theoretical and practical aspects of the program.

Teachers, students, and graduates question health care models, and some research is carried out on problems facing the population.

Through its teachers, students, and graduates, the school shows interest in the organization of activities to discuss the nature of nursing based on developed theories.

The school accepts responsibility for improving the profession's working conditions in the institutions where students have practical training, but the curriculum makes little provision for discussion with the students about that subject.

The school and service authorities are fully involved in the planning and evaluation of the health system and share responsibility for care.

The school, through its teachers, students, and graduates is involved in the development of new models of care which give priority to primary health care.

In fulfilling all its functions, the school emphasizes health promotion and disease prevention as the focus of nursing in the quest for major social change and health for the people.

The school participates in total nursing manpower development, not only for professionals but for the entire nursing team.

The school of nursing regards participation in multiprofessional teams and the capacity to make independent professional decisions as fundamental. It participates actively in the search for, the planning and realization of activities that demonstrate these qualities and features.

Teachers, students, and graduates, as members of interdisciplinary teams, participate in the search for ways to prevent and solve priority health problems through research.

Through its teachers, students and graduates, the school assumes a prominent role in research and other activities which tend to define the nature of nursing in contributing to the solution of health problems.

The school assumes a prominent role and establishes linkages with services to improve working conditions. It prepares nurses to play an active role in the search for strategies and mechanisms to accomplish this same goal.



58. At the policy-making and administrative levels of the school's development process, participation is restricted to administrators and teachers. Only in exceptional cases is the participation of students and graduates sought.

The role of the school's graduate in society

59. Graduates apply technical knowledge and skills in their area of work. However, following employment in the services, development of their analytical and research skills is very limited.

60. Graduates accept the ethical values of the institution where they work in regard to health services.

61. Graduates join the labor market, where they follow existing standards and lines of authority. They demonstrate a leadership capacity only in the management of patient units or in the implementation of specific programs in the health centers and districts.

62. Graduates are usually limited in the decision-making process on their job to routine questions in the practice area.

63. Graduates see nursing as a dependent and relatively secure profession. They sometimes abandon the profession to get ahead.

Students and teachers have participated in some areas and disciplines in the school's development process. Participation by graduates and/or the community is sporadic and unrepresentative.

Graduates demonstrate their knowledge, skills, and professionalism in their area of work and also undertake applied research to improve services. Their critical attitudes are limited to their participation in review committees and to the improvement of the services in which they are employed.

Graduates conscientiously apply professional values in their individual work with patients, families, and the community.

On entering the labor market, graduates demonstrate leadership qualities in nursing and strive to improve both services and the service personnel.

Graduates participate in policy-formulation and decision-making in regard to the nursing area.

Graduates identify with their profession. Some assume leadership positions to promote nursing.

Students, administrative personnel, teachers, and community representatives participate in the school's development process on a broad and democratic basis.

Graduates demonstrate knowledge, skills, and professionalism in their area of nursing. They develop critical and analytical attitudes in their work so as to identify, through applied research and other activities, new ways of promoting the development of the health services.

Graduates maintain a social awareness that fosters the application of values that tend towards social change.

Graduates demonstrate leadership capabilities that are conducive to changes in nursing in the health services and in health personnel and eventually to the transformation of the health of the people towards HFA/2000.

Graduates participate at all levels of decision-making in the health sector.

Graduates are fully identified with the profession and they promote its development in all areas.

INDIVIDUAL REPLY FORM

Student \_\_\_\_\_ Semester \_\_\_\_\_

Teacher \_\_\_\_\_ (area of responsibility) \_\_\_\_\_

Full time \_\_\_\_\_

Part time \_\_\_\_\_

Weekly working hours \_\_\_\_\_

Administrative \_\_\_\_\_

Other

(specify) \_\_\_\_\_

School \_\_\_\_\_

Unit \_\_\_\_\_

Instructions. - (Individual)

These descriptions represent some possible situations of what health and nursing could be in the year 2000.

Each participant, having been informed about the process of prospective analysis, will choose between the descriptions in columns O, A, B, and C (scenarios), the one that, in his opinion, is closest to the position of the school at the present time.

When the reader has identified in general terms the position relative to the descriptions of the variables (O, A, B, or C), he is requested to make a judgment on the extent or degree to which he feels that the scenario typifies the school's actual position. There are three options, 1-3 for each column with 1 being the least and 3 the closest to the A, B, or C description. The final answer therefore consists of a letter and a number. Eg. C-1.









TABLE OF DIFFERENCES BETWEEN EVALUATION AND PROSPECTIVE ANALYSIS

EVALUATION

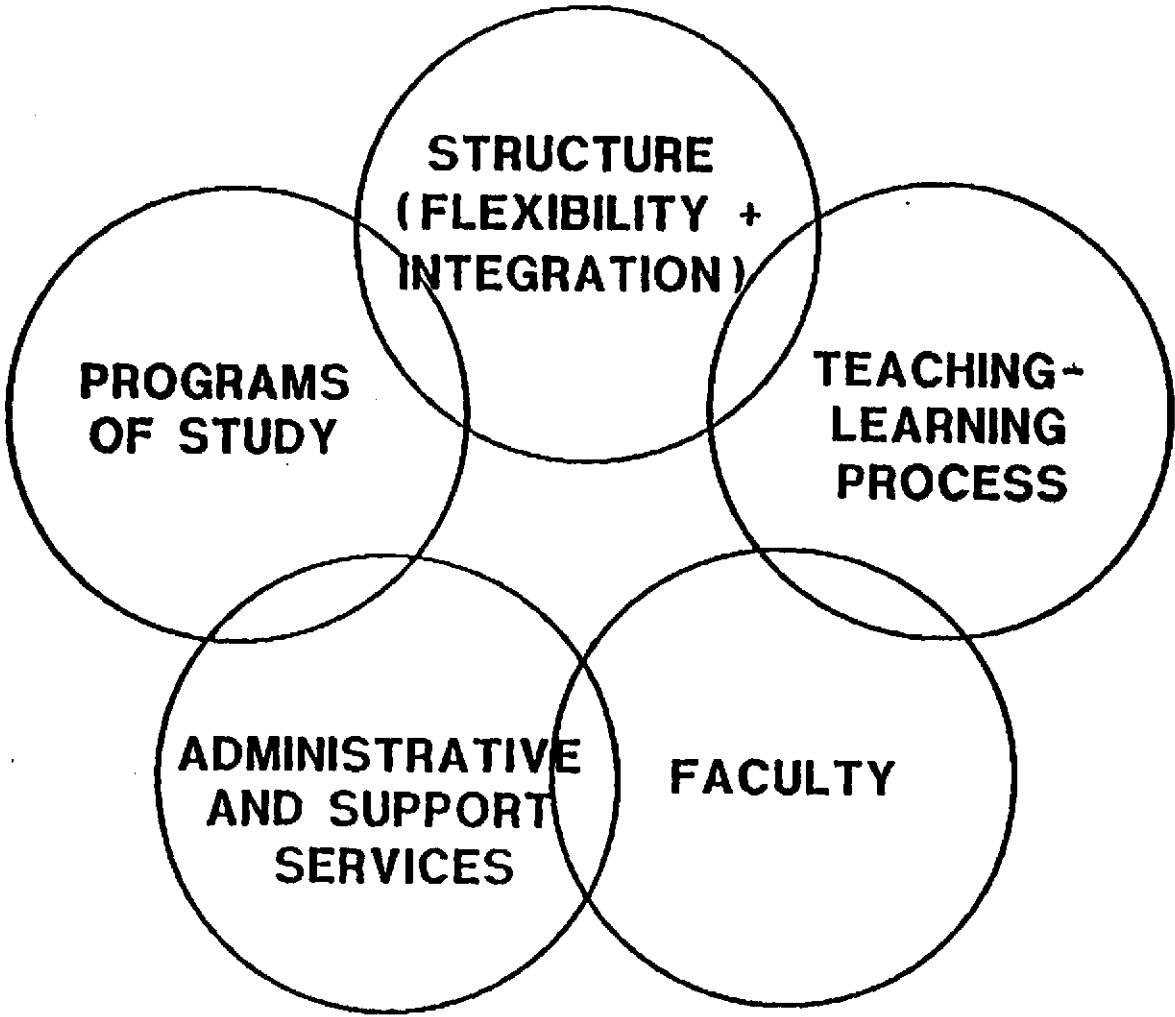
- based on criteria preestablished by experts with the intention of objectively measuring and quantifying the degree to which the orientation has been accomplished.
- tends to produce a vision of the institution through each of its components.
- tends to emphasize the educative process and educational aspects within the institution.
- tendency to look for the reasons behind the results.
- results demonstrate particular facts about the institution.
- another process is necessary in order to define priorities.
- the time necessary for compiling information is variable.
- known process, may be used for planning changes

PROSPECTIVE ANALYSIS

- based on opinions of all the elements involved in order to reach a subjective consensus about the aspects of its qualitative nature.
- vision towards the total unified development of the institution in its context, structure, función and integrity.
- focuses the role of the institution on reaching HFA/2000 and the changes necessary for it.
- tendency to sensitize participants towards the need for change which is motivating.
- results highlight tendencies and directionality.
- results point to priority areas.
- time for discussions and arrival at consensus can be significant.
- relatively new, model in experimental stage but proving useful.

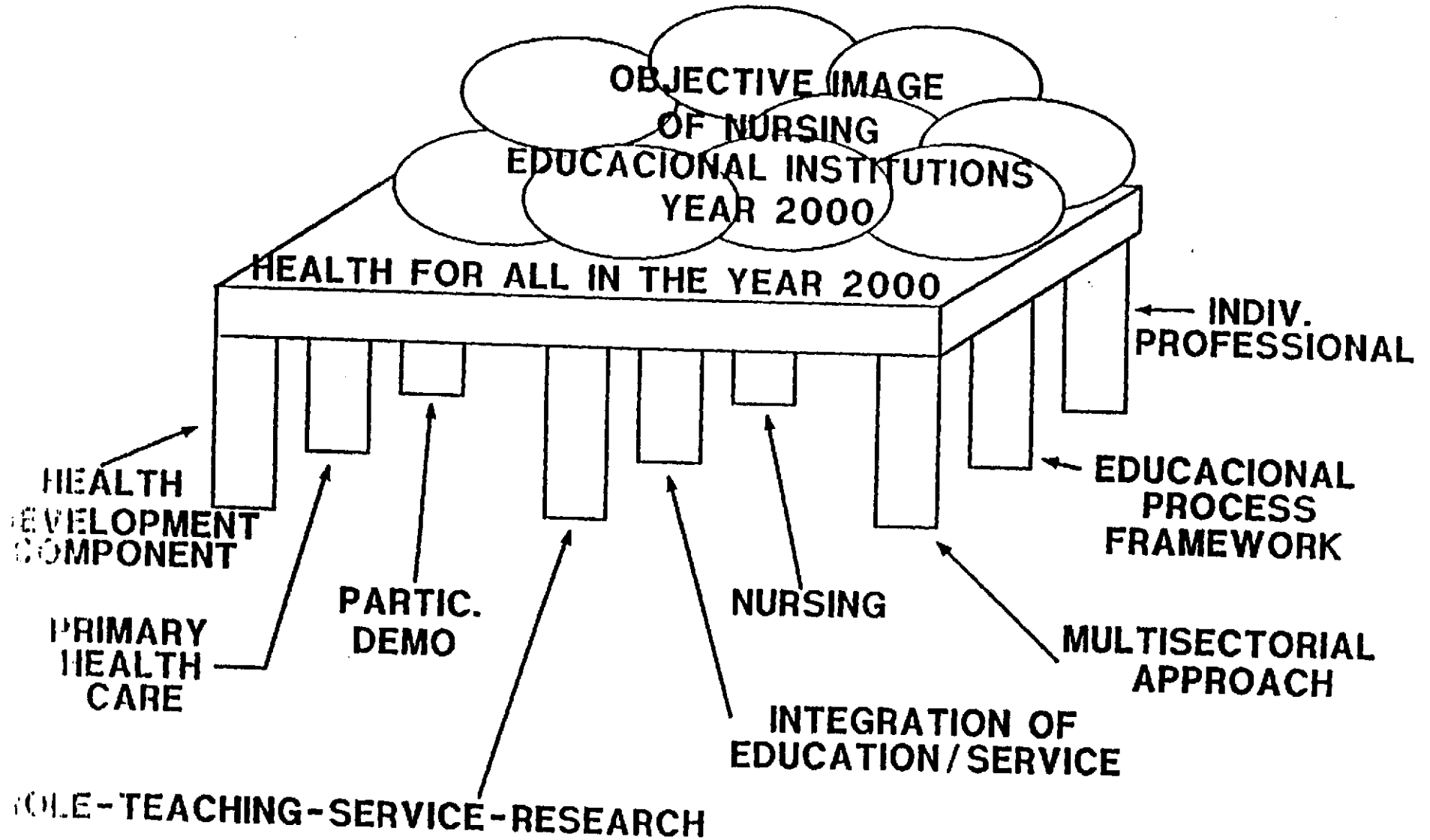


# FRAMEWORK FOR THE EDUCATIONAL PROCESS

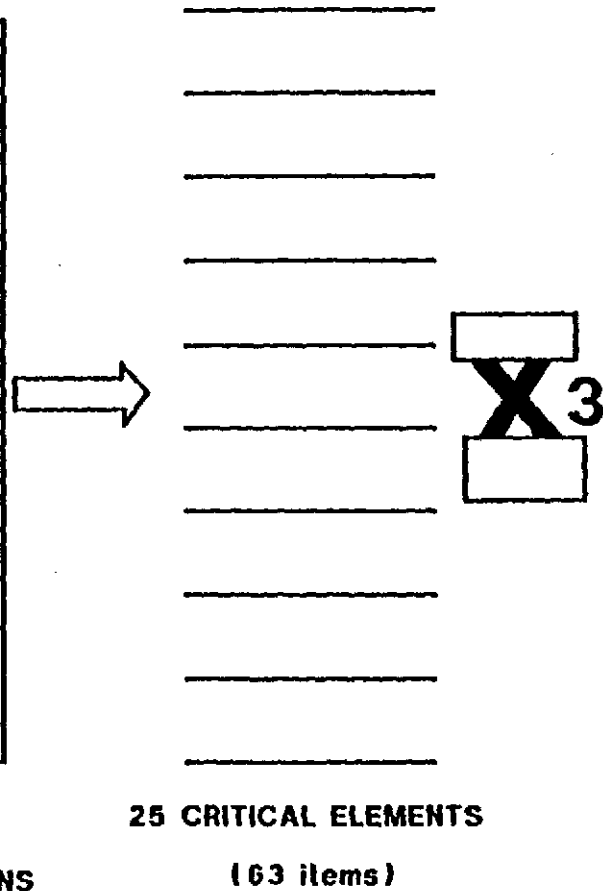
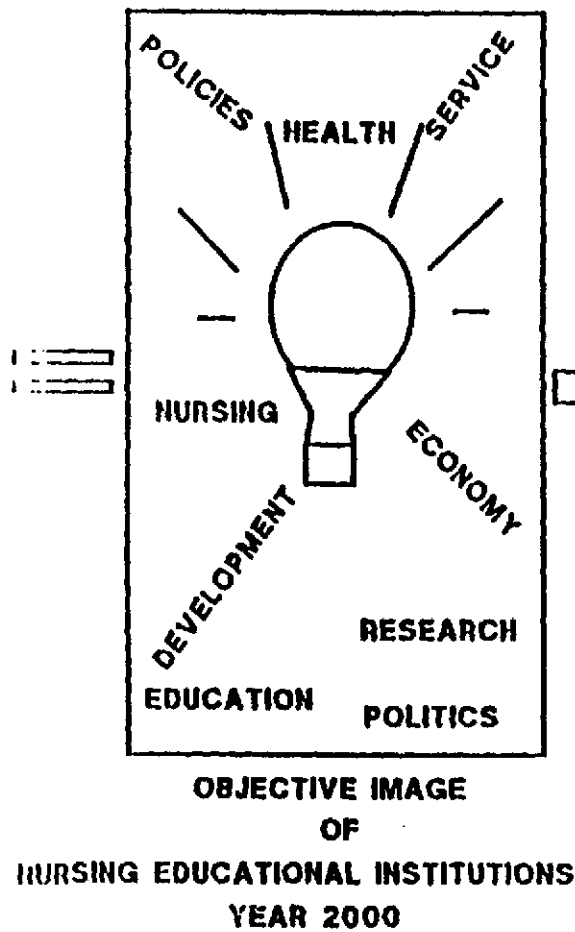


# CONCEPTUAL FRAMEWORK

HSM .1140.0 11/18/87.AW



# QUESTIONNAIRE DEVELOPMENT



**A**  
Stable situation - without great change

**B**  
Introduction of moderate changes,  
break-up of some actual tendencies

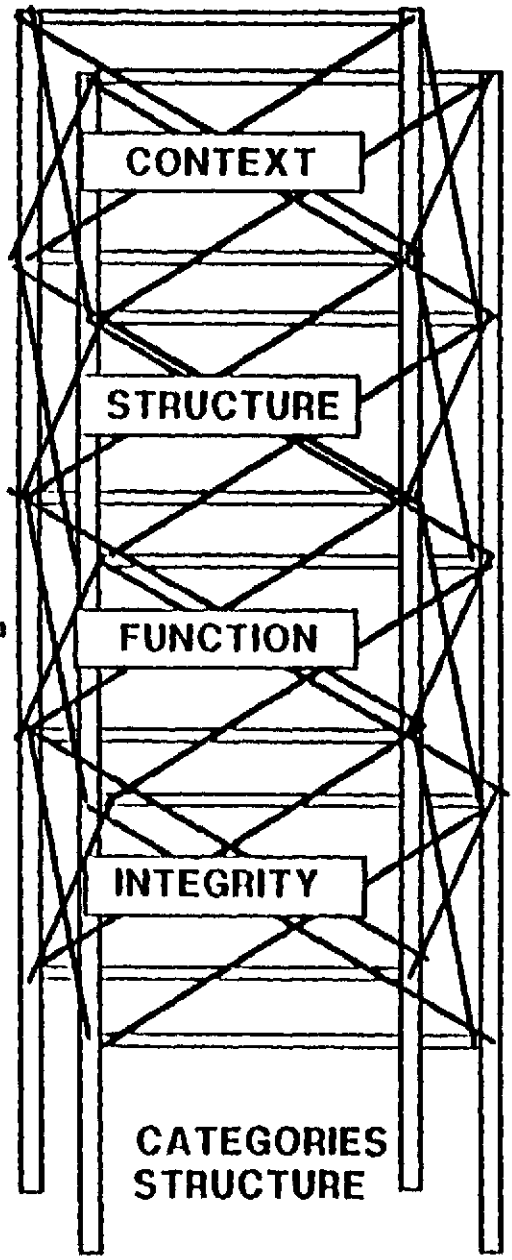
**C**  
Transformation or profound changes

**SCENARIOS**

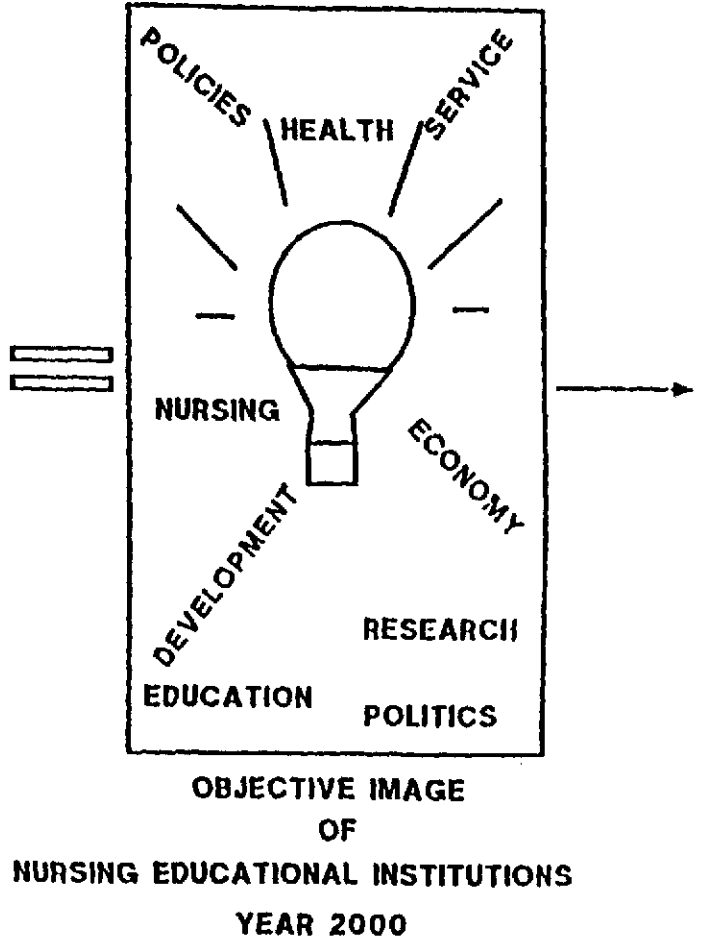
# QUESTIONNAIRE

YEAR 2000  
CHANGE  
PHILOSOPHY  
ACTUAL SITUATION  
TENDENCIES

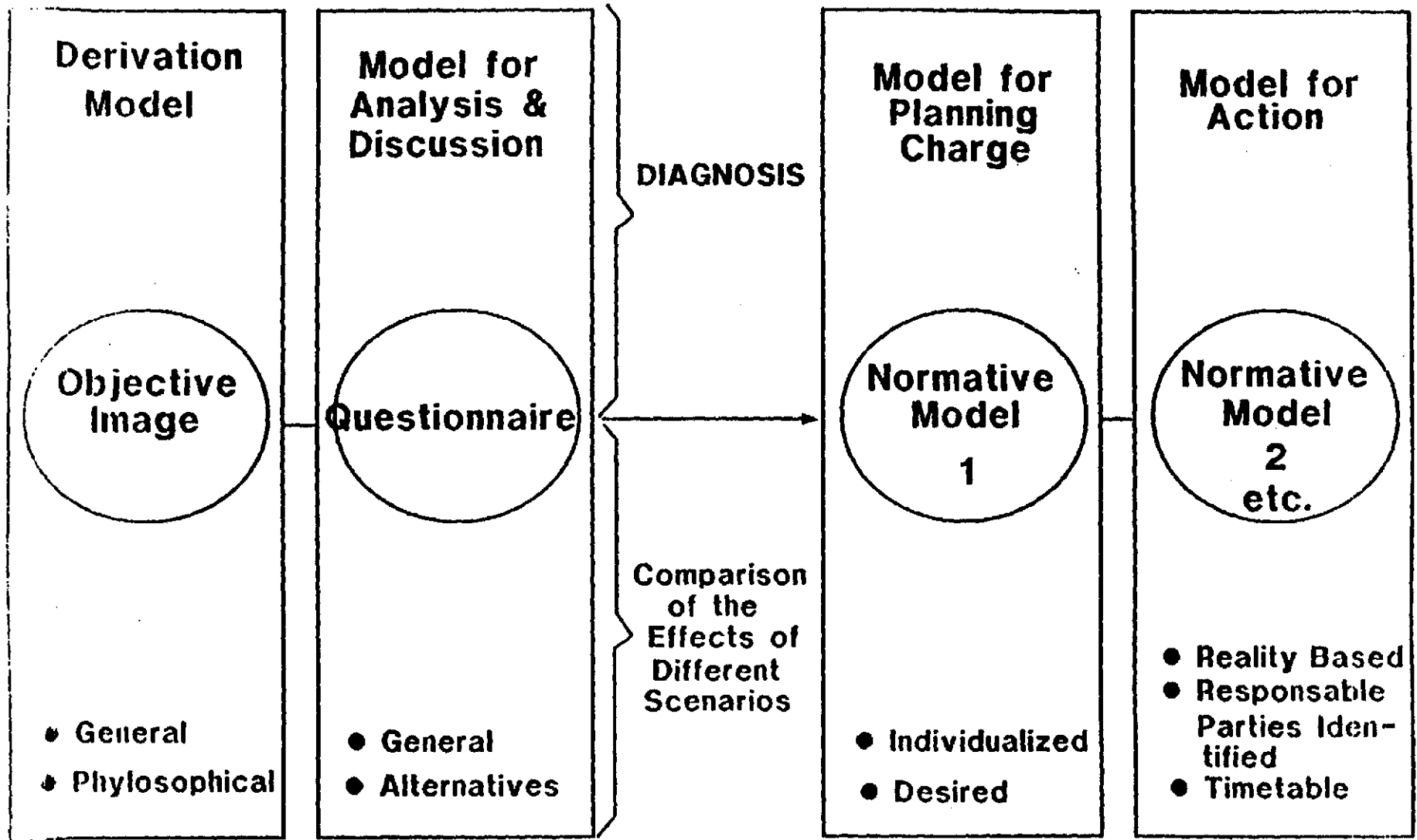
CONCEPTUAL FRAMEWORK



# DEVELOPMENT



# MODELS USED IN PROSPECTIVE ANALYSIS



# EVALUATION

1980 ←———— 1987

# PROSPECTIVE ANALYSIS

1987 ←———— 2000

