

## **CHAPTER II**

### **ESSAY**

#### **What is the feasibility of implementing a training program for operating room nurses ?**

##### **2.1 Introduction**

###### **2.1.1 Background of proposing the RHORNCD**

Rajavithi Hospital is a large hospital (1,167 beds), and serves as a center for providing academic services to the other hospitals managed by the MoPH. Therefore, many of the newly graduated nurses from other hospitals are trained at Rajavithi Hospital. The current training system, however, is not systematic and lacks clear course content, a set time-frame, and designated steps of training. Sometimes, the training depends on the individual moods of the trainers and the interest level of trainees. Therefore, some essential components of nursing discipline and practice are not covered so not complete performed in nursing care, for example, visiting patients before surgery and giving information to them about what is going on, what surgeons will do to them and what will happen after surgery. This informative guidance will

decrease the patient's stress and anxiety reduce the anesthetic drugs in intra-operative surgery.

Another big problem is that the time for training is also. Trainees sometimes are required to learn simply by doing. This method lags behind modern surgical operations and it is inappropriate for the current situation because the modern O.R. contains a lot of new, hi-tech equipment. Untrained operation of the equipment causes increased risk to the lives of patients and could damage the expensive machinery. Although the maintenance of the instruments and equipment is indirect nursing care, misuse or inefficient use by untrained nurses would have direct negative results on nursing care. Unnecessary complication may occur which could be costly for the patients and require them to stay longer in the hospital. One patient's long-term stay in the hospital decreases the number of other patients serviced. Moreover, the patient who stays long-term in the hospital may suffer psychic trauma and profit loss from earning.

Thus, it is necessary to determine and set the content for nursing care training in a unified and systematic way, in order to increase the competence of nursing care and improve health services. At the same time, it is important to develop O.R. nursing organizations and clarify the O.R. nurses' roles and values for international professional O.R. nurses.

### **2.1.2 The alternatives to and justification of selected approach**

The Operating Room is a specialty area. The four-year nursing curriculum includes some practice in this field but newly graduated nurses lack sufficient discipline and practice to begin to work. There newly graduated nurses have to be trained further before starting working in the operating room. There are several alternatives to solve this problem. The solution is first, to modify the Bachelor (four-year) nursing curriculum by adding practice time in the O.R. plus optional advanced courses for nursing students similar to the maternal-child advanced course or Psychiatry advanced course. This method is not appropriate for Rajavithi Hospital because Rajavithi Hospital does not offer the four-year nursing curriculum. So, Rajavithi cannot develop the four-year nursing curriculum by herself, the recent trend, however, is to eliminate from the four-year curriculum as the Nursing Faculty of Khon Kaen University has already done. Khon Kaen University requires only observation of field work for two days. The second alternative is to formulate the Operating Room Nursing Curriculum as a continuing internal service study at Rajavithi Hospital (RHORNCD). This alternative would be a more appropriate method for Rajavithi Hospital than the first and is more effective in producing quality nurses through training. With the RHORNCD, the producer can determine the number of operating room nurses being trained and can conduct evaluations at all stages (Sanguaun Nitayarumphong, 1997).

**Vision**

Vision consists of learning through the process of creating, experimenting and integrating. Vision is a flexible image to deal with an uncertain world. It is an articulation of strong values and culture together with the incorporation of the needs of many stakeholders. The vision statement must tell the direction of the organization and answer these questions: where is the organization going to go?, what is the organization going to be?, what is the organization going to do?, and for whom? The vision will influence the decisions, choices and actions of all people.

In my view, the vision of the O.R. nurse organization at Rajavithi Hospital should be: the Operating Room Nurse Organization at Rajavithi Hospital will strive to be the leader in developing the training of the professional O.R. nurse with a focus on patient care and providing the best in health care service to Thailand.

**Mission**

Mission is the purpose or the commitment of the organization. This commitment should express values and culture, incorporates the needs of many stakeholders, and express target outcomes, and performance measures.

From my view point, the mission statement of the O.R. organization at Rajavithi Hospital should be:

1. To train professional O.R. nurses with improved focus on patient care.
2. To train professional O.R. nurses to increasingly participate in providing health care information to the people.
3. To educate the professional O.R. nurses to be a health care team worker and a knowledgeable facilitator of changing health care technology.

#### **The objectives of the RHORNCD**

Objectives are the method or aims of the activity in organizing, staffing, leading and controlling, which are the basic plan of the organization (Weiheich, Koontz, 1993). The objectives of the RHORNCD are:

1. To develop the system of training O.R. nurses to include coverage in the discipline and practical roles of the professional O.R. nurse.
2. To improve O.R. nursing care, focusing on patients, through a clarified role of the specialty professional O.R. nurse.
3. To solve the shortage of the professional O.R. nurses by determining the needed quantity and quality of the nurses.

Operating Room (O.R.) nurses organization of Rajavithi Hospital wants to propose the RHORNCD as a continuing internal service study program. However, the

RHORNCD should be subject to survey and analysis to find the actual needs of the public. Once identified, the training program will be created in order to both meet those needs and to effectively solve existing problems. Despite the well-organized manner of this program's plan, in order for successful implementation and long-term survival of this program, Rajavithi Hospital must study the possible outcomes of the RHORNCD before the Rajavithi Hospital O.R. Training Program can be actualized.

## **2.2 The objectives of possibility assessment of the RHORNCD**

a. To identify the positive and negative factors on the organization, the program may have in order to utilize the positive factors use and avoid and improve the negative factors within the organization.

b. To identify the successful channels for implementation of the RHORNCD, identified from the factors available internal and external the organization.

c. To propose the strategic plan for successful implementation the RHORNCD.

## **2.3 The determinants of the possibility of implementation:**

a. The situation of the organization is determined both by external environmental factors (in terms of government policy/law or legal, socio- demographic, economic,

and technology), and internal environmental factors (in terms of capacity and facility in the organization).

b. The priority and posture of:

- The Organization, including organization structure, organization system, financial system, management practice and staff performance.

- The demand and needs such as the necessity of formulating the program and the demand of the clients for the RHORNCD or the market of the RHORNCD.

- The RHORNCD product, including the pattern of training, content of discipline and practice to meet the public and stakeholder needs.

c. The strategy comprises:

- An external strategy which is the management strategy to link the needs between organization and stakeholder, for example the strategy to coordinate and collaborate with the resources outside the organization or the stakeholders.

- An Internal strategy which is the management strategy in the organization, for example the strategy to build up the enthusiasm of teamwork and team leaders to collaborate or participate in the activities of the program.

## **2.4 The feasibility study of other projects:**

A feasibility study is often undertaken before implementing business projects. This type of study is also used in the health field. In 1992, for example, Dhurakijpundit University studied "Feasibility of Establishing the Faculty of Nursing

” (Pranom Otakanont, Penpun Ruksanon, Pongpen Chunhapran, Penpuk Yotnamkom, and Suchada Rutchukul., 1992). This study examined the possibility of producing nurses by reviewing the government’s policy and other research about the shortage of nursing staff. In addition, the university studied the internal organization of the institution that had the capability for establishing the Faculty of Nursing. The study evaluated the opportunity of investment and potential profit or loss, and the process of establishing and sustaining the faculty. Foreseeable obstacles and problems were studied by interviewing the managers, teachers, and nursing students. The study results were used for development in order to compete with other institutions and for long-term survival. This information could be used only as a guideline to consider and assess the problems and obstacles. However, this study covered only the shortage of nurses and did not address the needs of those who would like to study nursing. This is a significant issue of error because, for example, the shortage of nurses could be attributed to disinterest in this field of study or career. Even though the study showed that the Faculty of Nursing could be established, it could face a high risk of collapse because a lack of interest in coming to study nursing.

The second technique for evaluating the critical success factors of a new venture is a project feasibility study (Chiyot Suntivong, 1996). This type of study examines in great depth the market’s need of the products (market analysis) as well as the investment, production costs, selling price, sales volume, the kind and quality of the goods, and the existing demand and supply. The study will often examine the

situation outside and inside the country, as well as the market's problems and marketing and production techniques. The data will support the manager in assuring that production and investment decisions are in line with the project. This type of study is valuable for businesses which are concerned for long-term survival and competition.

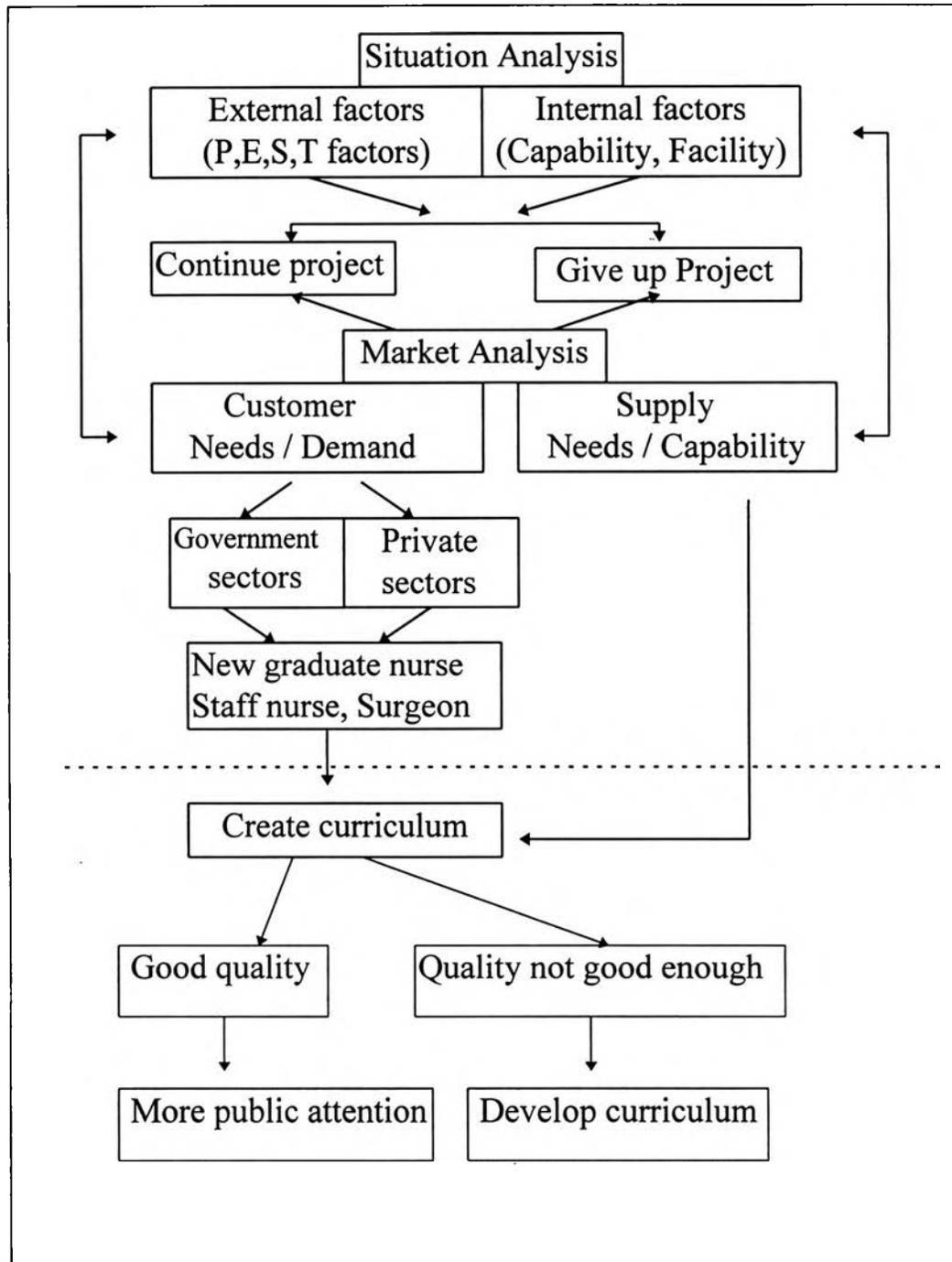
These two techniques are different. In the university study, political powers were the first priority to resolve before commencing study of other factors. The second type of project (a feasibility study) was aware of socio-economic powers as the first priority, more important than the political forces which affected the organization at that time. Business and public health are different primarily because business has higher competition than many aspects of public health care. In health care, there is a gap of knowledge between producers and customers. For this reason, the government must be involved in the health care service (business) more than other businesses, in order to control and provide equity to the people. Therefore, the competition and negotiation in health care are not as severe as other businesses. Most projects in health care service must be more aware of political powers than other powers. In order to sustain the project and ensure program survival, we should mix both types of analysis for our feasibility study.

The possibility assessment of the RHORNCD will present the environment of the organization's situation and the internal O.R. organization at Rajavithi Hospital in

terms of situation analysis. Market analysis will study the readiness of the O.R. organization, demand and needs of the nurses for the RHORNCD. The result of situation analysis and market analysis will be used as the channels for strategy formulation for the successful implementation of the RHORNCD.

The studied profile shows a conceptual framework of decision making (Figure 2.1) for project implementation formulated from the ideas mentioned above. The situation analysis (chapter 3, data exercise 1) will analyze both external and internal environmental factors of the organization to assess whether the project should be continued. The external factors will be studied in terms of political, economics, socio-demographic, and technology, while the internal ones will touch on capacity and facility in the organization considered as strengths and weaknesses of the organization. Market analysis (chapter 3, data exercise 2) is included to find out the needs and demands of the nurses for the RHORNCD. This market analysis is useful for producing the RHORNC in order to meet the needs, but this study is not included in creating the curriculum.

**Figure 2.1. The Conceptual Framework of Decision making for Project Implementation**



## **2.5 Situation Analysis**

The strategic plan of an organization is influenced by its stakeholders, the people or organizations involved or interested in the organization's activities. During the strategic planning process, it is important to identify the stakeholder groups and their needs because their influence can support or hurt the organization. This is the most difficult phase to apply in the strategic planning process because it requires in depth analysis of the ideas, belief and the baseline of decision making (Goodstein, Nolan and Pfeiffer, 1993). Moreover, we also need the intuition and a far sight of the future for estimation and prediction of influential direction. Stakeholders can be identified by using critical thinking and a technique of problem solving for analyzing their status, relationships and activities that may affect the organization. (Goodstein, Nolan and Pfeiffer, 1993).

### **2.5.1. Analysis of the Environmental Factors of the Operating Room Organization.**

It's hard to solve a problem when you don't even know it exists." (Fred Heiser, chairman, Heiser-Egan, Inc. cited in Fogg, 1994, p. 130).

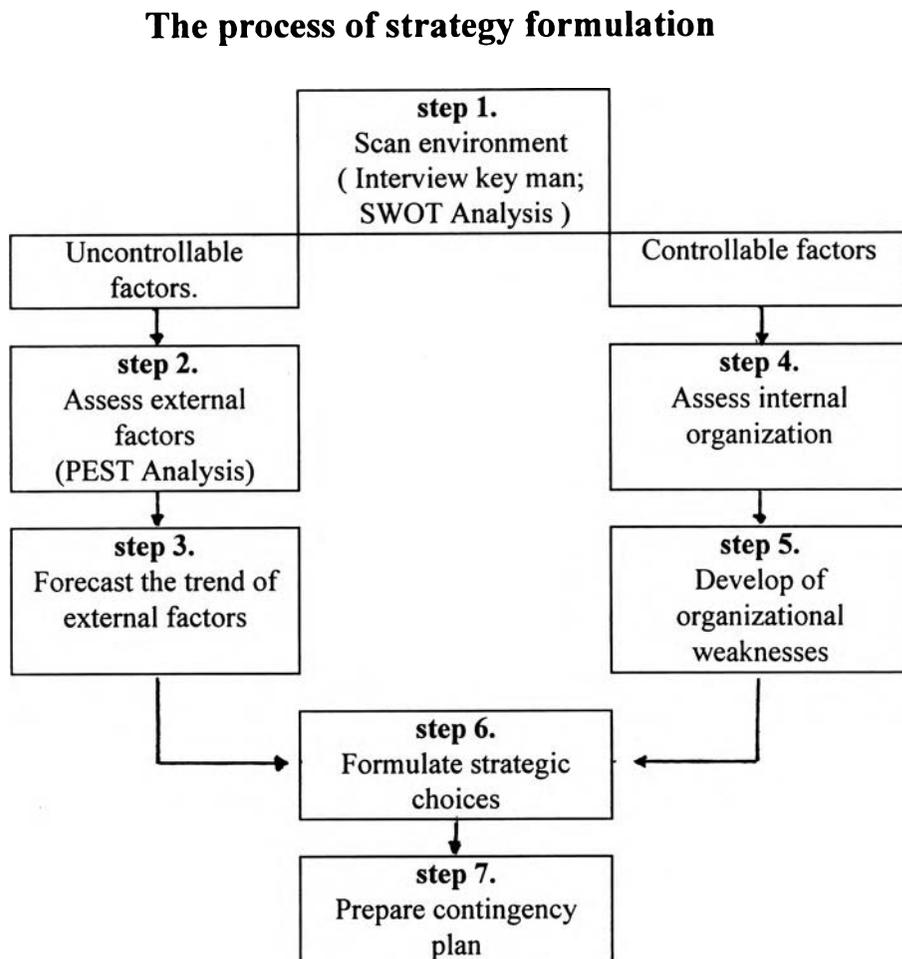
The process is to analyze the present situation (situation analysis) and the future desirable situation of Operating Room organization at Rajavithi Hospital and then to identify the gap (problem) and to formulate a program to fill the gap (Adit Laixuthai and Connelly, 1996 ). This planning process is a part of critical thinking problem solving.

### **2.5.2. The strategic planning approach:**

This study used the TOWS Matrix Model (Dyson, 1990) as a guideline of the strategic planning approach shown in Figure 2.2. Step 1, scanning the environment by interviewing key personnel in order to find out the ideas and needs of the stakeholders is the first thing to consider. At the same time, it uses the SWOT Analysis to analyze which is opportunity or threat to the organization. Then the uncontrollable and controllable factors are identified. The uncontrollable factors, mostly the external factors, have to be assessed by using PEST Analysis (Step 2) and forecasting the trend of those factors which will impact the organization in the future (Step 3). The controllable factors are mainly internal factors of the organization, showing strengths and weaknesses (Step 4). The weaknesses have to be eliminated in Step 5. Step 6 will use all utilitarian factors to formulate the strategic choices and finally prepare the contingency plan (Step 7).

This is a useful model, not only for finding the factors for formulating the strategic implementation program, but it is also useful for developing the capacities of the organization.

**Figure 2.2 The TOWS Matrix Model.**



Source: Dyson (1990)

### 2.5.3. External Environment Assessment

An external assessment will look at the outside world which sometimes, is difficult to understand and impossible to control. The external assessments will look for the relationship of the factors and outside groups (stakeholders) that will have or

influence or interact with the organization in the past, and present, and future situations. Johnson & Scholes (1993, p. 82) suggest three helpful questions as follows:

“ What environmental factors are affecting the organization now?  
Which of these are the most important at the present time? and  
Which will be most important in the future?”

The first question will help to identify the critical influences from environmental factors of the organization at that time. The second will help to identify the forces making changes in the organization, and the third will predict the influential forces in the future.

The benefit of external environmental factors analysis is to know the opportunities and threats which are useful in the planning action. This method helps the decision-makers manage the strategy for implementing the policy or program selected by creating the strategy from strengths and opportunities.

The external situation around the O.R. organization at Rajavithi Hospital is the situation of political power/policy or national plan, socio-economic, policy and the technology of Thailand which influences for implementation of the RHORNCD and the demand of the nurses for the RHORNCD (Chapter 3, market analysis in data exercise 2).

The opportunities and threats, identified in the external situation of the organization, should be considered as follows:

**Political Factors:** The political power represents the top management, including policy and law. The study of this present situation shows that the political power from the higher level (National level - the 8th Plan), middle level (Medical Department of MoPH) and local level (Director of the Hospital) has opened doors to produce the RHORNCD as a program for human resource development. The Nurses Association of Thailand (N.A.o.T) holds different views, however, as they would like O.R. field work to be a part of the curriculum of Medical-Surgical Nursing Board specialists. The N.A.o.T. prefers to produce nurses at two levels, the bachelor degree of nursing and master degree of nursing. Moreover, their idea is that the handling instrument is the main work of the operating room and the nurses are not necessary.

However, the political power showed more opportunities than threats, and advocates the RHORNCD. In the future, the power of the N.A.o.T. will be stronger if it has legislation to control all of the nurses' programs or activities.

**Economic Factors** The financial status of the population, level of education and social-demographics have changed, creating demand for a higher quality of life and expectations of high-quality health care, service and goods. From this study, the data (chapter 3, data exercise I) showed an increase in the supply of money in 1980-

1994, urging people to expect high quality in health care services (The Health Development Committee, 1995). Now, there is a good opportunity for improving and controlling the quality of O.R. nursing care service by the RHORNCD program. The RHORNCD is a program which will also help to provide equity to the clients. The gap in knowledge between provider and receiver will create inequity to clients, so the government should closely monitor service delivery in this respect.

**Socio-demographic:** Factors and competition, “Social life is never static but always in flux, it is a changing, renewing, and transforming by itself” (Whitehold, 1929, Sheldon, 1954). Rapid changes in society initiate competition and demand in the way of life such as competition in business, education, and luxury life. For this study, the demand of nurses for RHORNCD (showed in chapter 3, data exercise 2) advocate to formulate the program. The Operating Room of Srinakarintr Hospital (K.K.U. Hospital) a potential rival would also like to implement a training program. Other programs of continuing internal service study are also choices for the nurses and rivals of RHORNCD. However, they are in different places and different type of programs, so the system of training and program organization will be the factors of consideration for the clients’ decisions.

**Technology:** Numerous technology changes have occurred in recent years, and continued improvements are foreseen in machinery, equipment and surgical techniques. The increasing complexity of technology included in the techniques of

surgical procedure have created the specialty O.R. nurse shortage. This is an opportunity that advocates the RHORNCD formulation.

However, economic power is often converted into political power and, political power can be used to advance economic status and determine the direction of the economy, society, and technology (Vander, 1996). All of these powers should be of equal concern because all powers are in flux and therefore are unpredictable and uncontrollable. Such as Thailand in this present time. The Thai economic failure has involved both socio-demographics and politics. The International Monetary Fund's (IMF) is an organization which loaned Thailand money and proposed the strategy for the recovery of the Thai economic situation. One thing the IMF treaty suggested is that Thailand must set the budget for public health and education. This situation advocates the RHORNCD. Moreover, this situation makes it difficult for the new graduate nurses to look for jobs, and likewise is a good time for them to gain knowledge in order to have more choices to look for a new job after graduation.

The external environment still advocates forming the RHORNCD. In the case of the N.A.o.T., it is undertaken by the MoPH and their formal actions have not been backed by legislation. Therefore, the power of the N.A.o.T. is not strong enough to oppose the policies of the Medical Service Department of the MoPH. K.K.U. Hospital's desire to implement a similar O.R. training program, would be a potential

rival but it would benefit comparatively in order to develop the program quality and good human resource development.

#### **2.5.4. Internal Environmental Factors**

Information on the external environment is insufficient to make an immediate decision. It must be determined that the O.R. of Rajavithi Hospital is ready to have this program. The next step would be to study the internal factors of the O.R. organization of Rajavithi Hospital.

An internal assessment helps to identify the capability and possibility to support the RHORNCD program. Each part of the Hospital: management & organization, operations, and finance must be examined in turn, to identify strengths and weaknesses that could affect the successful performance of the organization in the future.

These strengths can be used to defend the organization from outside threats and get advantage over the competition. The weaknesses are areas which the hospital needs to improve in order to strengthen and turn to advantages.

The strengths and weaknesses, identified in the internal organization, should be to considered as follows:

**Management and Organization:** This part includes the talent of managers, the people in the organization, as a whole, the structure of the organization and management, the management style (incentive/reward), the information distribution, the training employee, and the relationship and coordination of team leaders and team work. The image of the organization must also be included.

Rajavithi Hospital, the management structure of the O.R. nurse organization delegates responsibility and authority to lower levels by setting up the coordinators to take charge in each branch of surgery. This is a good coordination strategy within and support team work. Within this management structure, it is easy to distribute information to all staff nurses. At the same time, the head O.R. nurse can inform the chief of surgery and the hospital director about the RHORNCD. The information distribution and relationship of the organization from top to bottom will establish the acceptable and collaboration for the RHORNCD implementation. Rajavithi Hospital is the largest academic hospital of the Medical Services Department, Ministry of Public Health. There are many specialist surgeons and many expert O.R. nursing staff, the number of surgery cases is plentiful, and utilizes unique surgical procedures. All of these factors make it an appropriate setting for training students. The problem of O.R. the nursing staff shortage at Rajavithi Hospital creates a heavy workload for nurses at present, however, and there is no coordination between operational nurses

and the academic sector, thereby preventing the number of experts in both practice and learning.

The management and organization, over all, has more strengths than weaknesses, yet the weaknesses can be eliminated by the re-organization the job description and collaboration with the N.A.o.T. to provide the professional academic O.R. nurse as a consultant of O.R. Rajavithi Hospital.

**Operations:** The operations will be identified in terms of development capability and adequacy of manufacturing facilities available to support the productivity to meet the expected growth and to achieve the objectives of the organization (Dyson, 1990).

At Rajavithi Hospital, O.R. staff have experience in training the 15-20 O.R. nurse trainees (O.R. records 1993-1996) who come from both private and government hospitals in each year. In addition, O.R. nursing staff have participated with the mobile surgery team in general surgery, ENT surgery, eye surgery and the academic department of Rajavithi Hospital, so they know the situation, problems, and need for the creation of the RHORNCD. However, Rajavithi Hospital still has problems including the unclear role of O.R. nurse, the high workload, and the decreased role of nursing care in pre-operative, intra-operative and post-operative care. The O.R. nurses must also excessive attention to new, hi-tech facilities.

For the most part, the skill of the staff and the facilities available in the O.R. organization have the capability to produce the RHORNCD, but the O.R. organization has to adjust the role and the job description of the O.R. nurse to make it possible.

**Finance:** The capital structure, financing, financial planning and the accounting system of the organization are the necessary fundamentals for formulation and implementation of a project or program. Even though, the Rajavithi Hospital is a government sector and non-profit sector, providing, funding to support and maintain the program is a heavy burden on the government. Financial planning and accounting system for RHORNCD are necessary to consider for the long term survival of the program.

Rajavithi Hospital derives much of its revenue from leasing space on the premises to private firms, such as the Siam Commercial Bank, the post office and a 7-Eleven shop. The Hospital also has projects collaborating with the private sector such as Rangsit University and the people provide funds. There are also a lot of patients (S5). However, Rajavithi Hospital must pay a lot of money for many projects. The RHORNCD is a program to bring in income to Rajavithi Hospital in the long term because of demand for RHORNCD is nurses more than (data exercise 2) the number in current training (about 15-20 nurses per year). This means Rajavithi Hospital is initial fund invest will be low because O.R. Rajavithi Hospital has facilitators (O.R. staff nurses) and facilities enough to provide and maintain this program. After this

program is established, it can survive by itself and may bring profit to Rajavithi Hospital in the long run.

**Other factors:** This evaluation will focus on the factors which are the strengths and weaknesses of the organization, prominent during a particular time period (Dyson, 1990).

In February, 1997, the O.R. of Rajavithi Hospital contacted Prof. Pr A. Patel at the Ramond Poincaré Hospital, France to support the expert O.R. nurses and assist and oversee initiation and exchange of O.R. staff. This opportunity to have a consultant from another country with experience in O.R. nursing curriculum will help to strengthen the weaknesses of the current O.R. organization.

Analysis of internal environmental factors of the O.R. of Rajavithi Hospital found that there were more strengths than weaknesses. Rajavithi Hospital is prepared to have the RHORNCD and it is an appropriate venue for such training. Although a shortage of personnel exists, if job descriptions of nurses are developed and clearly separated from other positions, it would decrease unnecessary or redundant duties.

## **2.6 Strategies**

Strategy is an art of action which is systematically formulated from the facing situation of the organization in order for implementation and change in the

organization with objectives, goals or purposes. Some definitions of strategy which reflect various interpretations are:

The art of war, especially planning of movements of troops and ships etc., into favorable position; plan of action or policy in business or politics etc. (Oxford Pocket Dictionary).

The determination of the long term goals and objectives of an enterprise, and the courses of action and allocation of resources necessary for carrying out these goals (Alfred Chandler, 1962, *Strategy and Structure*, MIT Press, Cambridge, Ma. cited in Craig and Robert, 1993, p. 11).

The policies and key decisions adapted by management that have major impacts on financial performance. These policies and decisions usually involve significant resource commitments and are not easily reversible (Robert D Buzzell and Bradley T Gale, 1987, *The PIMS Principles*, Free Press, New York. cited in Craig and Robert, 1993, p. 11).

Strategy is the pattern of objectives, purposes or goals and the major policies and plan for achieving these goals, stated in such a way as to define what business the company is in or is to be in, and the kind of company it is or is to be (Kenneth Andrews, 1971, *The Concept of Corporate Strategy*, Irwin, Homewood, III. cited in Craig and Robert, 1993, p. 11).

These descriptions help to emphasize the importance of strategy in different applications.

### **The strategic formulation of successful channels for implementation of the RHORNCD**

Tactics of strategic formulation:

“ One must be aware of one’s strengths: more important, one must know one’s limitations. To be fully effective, one must know oneself ” (-Thomas R. Horton, former CEO, American Management Association. cited in Fogg, 1994, p. 130).

The process of strategic formulation will combine all positive and negative factors from outside and inside the organization which require aid to systematize these choices. The methods will facilitate matching the external threats (T) and opportunities (O) with the internal weaknesses (W) and strengths (S) of the organization (Dyson, 1990).

## **2.7. Conclusions**

Rajavithi Hospital should offer the RHORNCD, as one method to develop the careers of O.R. nurses, to improve current training, and to improve the role of the O.R. nurse in terms of providing good pre-operative, intra-operative and post-operative nursing care. The outcome of O.R. nurse performance in providing good patient care will be a tool to evaluate the value of O.R. nurses.

The situation analysis in terms of external and internal analysis showed the feasibility of the RHORNCD if they can eliminate the redundant duties of the professional O.R. nurse and reduce the problem of the O.R. nurse shortage. The successful implementation the RHORNCD should collaborate and coordinate with the stakeholders especially the Thai Operating Room Nursing Society (T.O.R.N.) by using the strategic plan for implementation the RHORNCD. The strategy for implementing the RHORNCD at the recommendation of the N.A.o.T. is to combine the opportunities outside with the strengths inside. The capacity of the O.R. nursing

staff and facilities should be reorganized to propose the RHORNCD system of training O.R. nurses, to determine the number of production, and focus the O.R. nurse training on patient care. The second priority strategy is using the Thai Operating Room Nurse (TORN) to provide the academic expertise and serve as a consultant to organize and strengthen the role of the O.R. nurse which is an internal weakness. By eliminating the redundant duties which are not necessary for the nurse to do, this method will help to reduce the workload of the nurse and reduce the problem of the nurse shortage. When the weaknesses become to strengths inside the organization, it will protect the O.R.. organization from threats outside the organization.

## References

- Adit Laxiuthai, and Connelly, T.J. (1996). Planning and public health. Journal of Demography, 12, 31-43.
- Butler, R. (1991). Designing Organizations: A decision-making perspective. London and New York : Routledge.
- Craig,J.C., and Robert, M.G. (1993). Strategic Planning. London: Kogan Page.
- Cassels, A. (1996). Aid instruments and health systems development: an analysis of current practice. Health Policy and Planning, 11, 354-368.
- Chiyot Suntivong. (1996). Project Feasibility Studies. Bangkok: Thaivatanapanit.
- Chulalongkorn University. The College of Public Health. (1993). Attributes and threshold capacities of public health graduates. Bangkok: The College of Public Health.
- Conn, C.P., Jenkins, P., and Touray, S.M. (1996). Health Policy and Planning: Strengthening health management: Experience of district team in the Gambia. A Journal on Health in Development, 11, 64-71.
- Dyson, R.G. (1990). Strategic Planning. West Sussex: John Wiley & Sons.
- Fogg, C. Davis. (1994). Team-Based Strategic Planning: A Complete Guide to Structuring, Facilitating, and Implementating the process. New York: Amacom.
- Goodstein, L., Nolan, T., and Pfeiffer, J.W., (1993). Applied Strategic Planing. New York: McGraw-Hill.
- Johnson, G., and Scholes, K., (1993). Explore Corporate Strategy: Text and cases. third edition, Printice-Hall, p. 82.
- Pranom Otakanon., Penpun Ruksanon., Pongpen Chunhapran., Pepuk Yotnamkang. and, & Suchada Rutchukul. (1997). A Feasibility Study of Establishing Faculty of Nursing. Dhurakijpundit University.

Sanguan Nitayarumphong. (1997). Office of Health Care Reform Ministry of Public Health (Ed.), Health Care Reform: At the Frontier of Research and Policy Decisions. (pp. 10-14,23). Nontaburi: Office of Health Care Reform Ministry of Public Health.

Zanden, J.W, and Vander., Sociology: The Core. (1996). Ohio: McGraw-Hill.