

CHAPTER IV

Data Exercise

4.1 The objective of data exercise

1. To ensure the quality of analysis tools
2. To improve the proposal and the investigator's skill needed in implementing the project.
3. To be preliminary input to the study

4.2 Data Collection Technique

For this study, The investigator preferred to use the in-depth interview with the provincial policy makers and the focus group discussion and the questionnaires with health center personnel who work in different area. Focus group discussion was done by health centers personnel in rural area, Nong-Yai District and questionnaires were distributed to the sample group in urban area, Muang District. The investigator was gather data by herself.

Data was gathered in October 24-31, 1999. Of 30 questionnaires distributed and 100 % were returned.

The strength of this study is that it will be done in the student's workplace. This allows the student access to detailed information and the current direction of the situation that is not obvious or readily available to outsiders. At times, the student's

experience helped to predict events that may occur in the future. Data collection in a field of work may be biased such as in regard to the Personnel Development sector, a unit for academic development of health personnel. The Personnel Development staff know the problems in the field and would like to show efficiency work. It is a weak point in the student's workplace that bias can surface unconsciously. To correct this weak point, an outside advisor from another field should be assigned to detect faults.

The external environment data from the PEST analysis can give answers and can represent the entire province. The data of the current situation is secondary data, collected from reliable sources throughout the whole country. The data include facts such as Thailand's economic collapse resulting budget reductions in many projects especially human resource development. Activities must be cost effective, thus the organization should to apply its personnel development economically and within the resources available.

4.2.1 The results from in-depth interview with the provincial policy maker:

The nine key personnel interviewed including: The Provincial Chief Medical Officer, The Promotion and Development Health Technician level 9, The Social Medicine Expert, The Public Health Administrators level 8 , The chief of Planning and Evaluating sector, The chief of Personnel Development sector, A district health office and two people from Personnel Development sector. The interviews were noted and tape recorded. The information from these nine key personnel formed the guideline for gathering data from other people for the purpose of discovering facts and confirming information. The interview data from

key personnel is believable but cannot represent all ideas, because it is just exploratory data gathered to generate the questionnaires for later study. If we would like to use the results for major policy decisions, we must use large scale data. The lowest quality samples generally consist of 20-50 respondents usually chosen at the convenience key personnel for pilot tests, exploratory research.

This study found that all people were in agreement about improving health center personnel academic development's opportunities in Chon Buri but were in disagreement in their viewpoints regarding the obstacles to management. Some gave opinions about the lack of information systems and collaboration between organizations. The job responsibilities of community health workers emphasis on primary health care which is not necessary to support continuing education, and there are also constraints in supporting health center personnel development. One reason is the management in District Health Office. In addition, the characters of development had not assessed personnel needs, which are based on the central policy emphasizing technical skills which not relevant to health center personnel. And the most important criterion for success is whether top management agrees with the policy to promote health center personnel development. All these comments are the starting point of this study. (Appendix A)

4.2.2 The results from focus group discussion with health center personnel in Nonng-Yai District:

Focus group discussion was done with 9 health centers personnel in Nong-Yai District. The investigator is a facilitator and the one from Personnel Development sector of CPHO is a note-taker. The focus group discussion participants were asked different questions about their organization's academic development. They were asked to elaborate the quality of different development criteria and patterns, including facilities and career development services. The study showed that, most of them agree with the patterns of academic development but they would like the provincial administrators promote their value and give them the opportunities. (Appendix B)

4.2.3 The results from questionnaires which distributed to health centers personnel in Muang District:

30 questionnaires were distributed to 30 health centers personnel in Muang District. A questionnaire was generated by formulating several questions for each part based on health centers personnel views expressed in the focus group discussion. The first section of the questionnaire asked personnel what they expected from CPHO's support in their academic development. The second section rated their opinion regard the importance of each category (training, academic field trip and continue education) to their academic

development experience. The third section examined the agreement of those personnel to the CPHO's actual development supporting. Subjects were asked how they perceived the supporting at their workplace. The results from this study showed that, most of health centers personnel appreciate with the central policy which emphasized on the concept of human resource development. Ministry of Public Health was eager to develop overall personnel by individual development, career development and organizing development to create a sense of continuous development.

But in the opposite, most of them perceived that, CPHO to be somewhat insensitive in supporting their needs, delaying where it should have acted quickly and decisively, lack of the strategic plan which effective implementation and improper utilization of provincial resources and facilities and the supporting always provide to health personnel in higher level of education such as doctors, nurses, etc. They are always obstructed in continue education in Master degree.

4.3 The Environmental Scan

4.3.1 Introduction

The possibility assessment of the situation analysis for human resource management in Chon Buri is a study of the feasibility for improving the opportunities of academic development for health center personnel which will identify and assess the

forces or powers of external and internal environmental factors of the organization in order to determine successful methods for implementation of systematic human resource management. These methods will help to formulate the systematic strategic plan for successful implementation. The strategic plan of an organization is influenced by its stakeholders. Who are the health center personnel or organizations involved or interested in the organization's strategies.

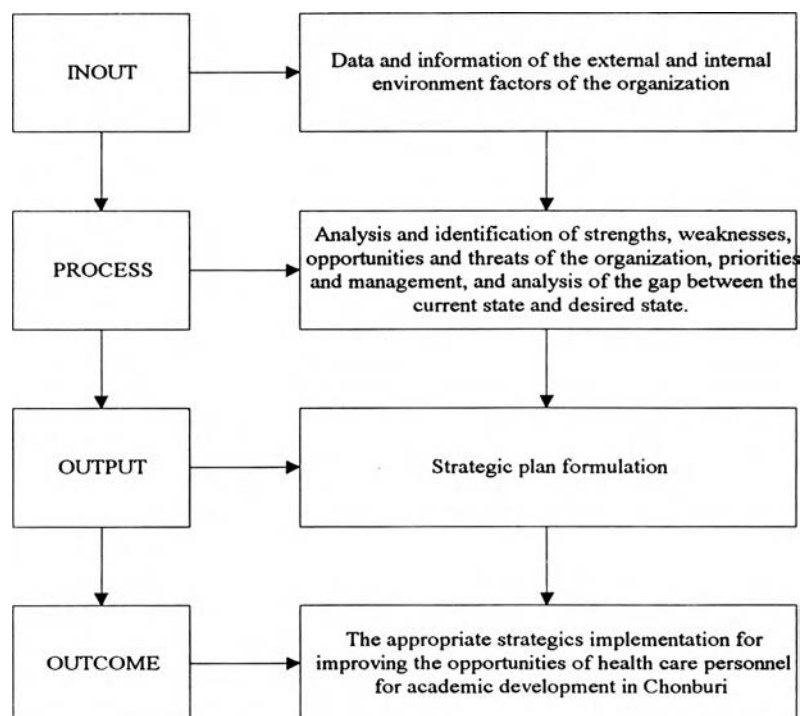
In proposing the systematic strategic plan, three basic questions were needed. (Gup. 1979). The first of these "Where are you going?" Without a clear sense of direction- without a mission statement, clarity about the scope of operations, and a set of specific goals and objectives-an organization may be adrift. The second question is "What is the environment ?" In answering this question the organization is forced to take a hard, objective look at itself, its external environment, its competitors, and the threats and opportunities that these pose. Furthermore, the organization must measure the gap between its goals or objectives and its capacity to attain these goals or objectives. The final question that strategic planning must answer is "How do you get there?" That is, what are the specific business models that can enable the organization to reach its goals and how do the organization's resources need to be allocated to make these models work? These questions require concrete answers and raise doubt whether this study could be successful in implementation.

This study is qualitative descriptive research, describing the characteristics, ideas, qualifications, and detail of the situation, The result of the study will be utilized to develop strategies to close the gap of human resource management and successful

implementation for improving the opportunities of academic development for health center personnel in Chon Buri.

This study uses a descriptive methodology, beginning with interviewing the key personnel in order to assess the ideas, acceptance, and reasons for improving the opportunities of academic development for health center personnel. The sample group was selected by mapping the organization where the management was involved or related to departmental planning. The purposive sampling chose people who are provincial policy makers or have experience or authority in making decisions and influencing activities and programs for health center personnel. The methodologies and techniques are shown in Figure 3.1

Figure 4.1 The process of studying the situation analysis



Source: Goodstein (1993)

4.3.2 The objective of the environmental scan

1. To identify the positive and negative factors of health center personnel academic development in Chon Buri.
2. To identify the successful methods for appropriate strategic planning which support the positive and combat the negative factors.
3. To propose for implementation the strategic plan for health center personnel academic development in Chon Buri.

4.3.3 Methodologies and Technique

For the environmental scan, external environment data was collected from secondary data which included political policy, economics, socio-demographics and technology. This data was collected from reliable sources throughout the whole province. The internal environment data was collected by observation and from secondary data in the organization in terms of management and organization, operations, finance, and other prominent factors during a particular time period.

The exploratory data was gathered to generate questionnaires for later study. The interviews surveyed the perceptions, general situation, and ideas of each stakeholder. This information was used as a guideline to create the questionnaire study in gap analysis and as evidence of external factors of the organization which will be used as part the strategy to improve the opportunities of health center personnel academic development.

4.4 Data Exercise: Gap Analysis

4.4.1 Introduction

This study will analyze the gap between the current management and the desired management. This gap analysis will offer a disciplined methodological approach for strategies to improve management problems by analyzing the environment. Gap analysis is an in-depth comparison of the data generated during the performance audit with data requisite for executing? The strategic plan. It is a reality test which requires the development of specific strategies to close each gap identified. This analysis will provide the answer to the question of whether the skills and resources at hand are sufficient to close the gap to achieve the desired future within the proposed period. In application to this study gap analysis examine the health center personnel need in career development. This divided in to a three-step process: evaluating the current state of their development, proposing their needs in the future, and conducting an analysis of the steps necessary to achieve the future needs.

In the same way, the strategic planning activity in an organization should provide managers with an opportunity to address some basic questions about the organization in a manner that they cannot do in the course of their day-to-day operational activities. These critical questions are simply: (a) What has been our organizational purpose? (b) What is our present? (c) What should be our mission in the future? (d) How can we best act to assure that our mission becomes what we want to be? In addressing these questions, the manager must identify and analyze historical fact and culture, present circumstances, and future “images” (William R.King, 1997)

To answer these questions, strategic planning involves important, high-level organizational choices. It is applicable to any situation so long as (a) it is directly related to overall organizational purposes, (b) it is future-oriented (c) it significantly involves uncontrollable environmental forces that affect organizational performance.

This step should investigate the people involved in health center personnel academic development. It concentrates on examining the important attributes for our stakeholders and the relative strengths of each factor for each of these attributes. If a gap exists between the current situation and the ideal, we may try to close it.

This gap analysis is only a data exercise for learning about how to evaluate the current state and conduct an analysis of the steps necessary to achieve the future vision. The resulting gap provides valuable information about areas which need improvement.

4.4.2 Objectives of this study

1. To investigate the appropriate measures for improving the current health personnel academic development supporting by CPHO and the gap between the current situation and ideal situation.
2. To assess the needs for academic development of health center personnel.
3. To identify the possibility of CPHO developing a strategic plan for human resource development.
4. To identify the appropriate duration of long-term planning
5. To assess potential obstacles of health center personnel academic development.

6. To assess the readiness of CPHO in improving the supporting in academic development for human resource management.

This study is descriptive research, both qualitative and quantitative, describing the characteristics, qualifications and details of the situation. The information of the study will be utilized to formulate strategies to improve systems of management and implementation. It will find out the needs and variables in systematic health center personnel development.

4.4.3 Supply of the strategic planning

The CPHO will be the planning organization whereas the district health office will be the facilitator.

4.4.4 Methodologies and application

Conclusion from the interviews with nine key personnel

The survey collected qualitative data to identify the potential and readiness of CPHO departmental planning in personnel development managing. This data was collected by an in-depth interview of the key personnel regarding their opinion in health center personnel development and a focus group of health center personnel. The focus group participants were asked different questions about their organization's development. They were asked to elaborate the quality of different development criteria and patterns, including facilities and career development services.

After the focus group session was over, the information was divided into three parts. A questionnaire was generated by formulating several questions for each part based on health center personnel views expressed in the focus group. The first section of the questionnaire asked personnel to describe what they expected from provincial health personnel academic development planning (there was no reference in this section). The second section used a constant sum scale, probed personnel about three categories (training, academic field-trip and continue education). The subjects rated the importance of each category to the development experience. The third section, using a 1 to 7 scale (strongly disagree, mostly disagree, disagree, not sure, agree with, mostly agree with and strongly agree with) examined the CPHO'S actual development supporting. Subjects were asked how they perceived the supporting at their workplace.

A pilot study with the questionnaire followed in order to ensure a quality instrument. Thirty health center personnel were surveyed in the pilot test. Based on their written replies, the questionnaire was revised to ensure the effectiveness of each question. An analytical method was used to determine which questions were the most practical for the survey. The responses from the pilot study were entered into an SPSS statistical package. This method calculated the reliability of each question by observing the correlation with responses given in the pilot study. The questions with the highest correlation's were the most reliable because the responses were more consistent and stable. An alpha test was also performed, generating an alpha value which determined the value of the questionnaire the particular question was deleted the revised questionnaire was then administered to the next step of the study.

4.4.5 Results

When analyzing the results, a gap score of zero meant that personnel perception of current management equated with what they expected from management. A score below three indicated a development below expectations. A positive score meant that the CPHO was providing personnel with more than they expected.

The weighted gap showed only one dimension loading above three. It was only the central policy emphasis on human resource development that surpassed personnel expectations. Health center personnel appreciation of the central policy came as no surprise given that the MoPH was eager to develop overall personnel and individual development, career development, and organizing development to create a sense of continuous development.

All the other variables scored in the negative zone (score 0-4). The worst score was for clarity, followed by facilities and competence. The clarity measurement was built around the planning aspects of accuracy and direction. The problem with facilities was that personnel perceived the CPHO to be somewhat insensitive in supporting their needs, delaying where it should have acted quickly and decisively. Competence scored third lowest despite the fact that the CPHO had actively increased its ratio of Bachelor and Master degrees over the last few years. However, competence was measured not only across Bachelor or Master degrees in rural areas but across all contact personnel in health care.

4.4.6 Recommendations

The above results suggest that the CPHO needs to radically improve its management. It needs to understand its personnel needs and looking for the appropriate strategies which improve the opportunities of academic development for health center personnel. This can be done by organizing focus groups on a frequent basis. The focus groups should continue over time because the environment always evolves. The focus groups should represent the diversity CPHO. Surveys should be distributed each budget year to ensure quantitative charting of development components on a longitudinal basis. The administration should look at these results to see what is working and what can be improved. Personnel Development sector should also coordinate with the different departments on each of the dimensions and investigate for the data which necessary for strategic planning. Such coordination will ensure a holistic view of the process.

A holistic view is a prerequisite for revamping services at this organization. With so many variables falling below personnel expectations, pathwork would not fix the problem. The departmental planning of CPHO needs to rethink its purposes in a radical way. It may even have to reexamine its mission.

And there are recommendations regarding the study process which add:

1. Data in the gap analysis (data exercise) cannot represent the opinion of health center personnel in the province but only some parts of two districts (Muang and Nong-Yai), which have less than 30% of the personnel and are therefore too small. For the gap analysis to be perfect and represent all health center personnel the methodology should be:

- 1.1 Set the time frame to 2 weeks
- 1.2 Initial design work, sample design and selection in 2 weeks.
- 1.3 Formulate the questionnaires, including pilot work, design and printing of the final questionnaires for 4 weeks.
- 1.4 Prepare the addresses of the Health Center, letters requesting permission to use questionnaires with the health center personnel. Send the questionnaires to those at the Health Center or bypass the Health District Office, compose follow-up letters and wait for responses; (four weeks)
- 1.5 Analyzing the data (four weeks)

2. The objectives of this data exercise were to determine only expectations of the strategies which formulate to improve the opportunities of academic development for health center personnel. In actual practice, collecting data should also study the relationship between all varying factors. The objective of this study should serve to:

- 2.1 To identify the potential of the appropriate strategies and the trend of formulating
- 2.2 To identify the health center personnel willingness to attend.
- 2.3 To identify the appropriate duration of the plan.
- 2.4 To assess the potential obstacles and identify the factors that influence decisions.
- 2.5 To assess the readiness of the Personnel Development sector of CPHO in providing or supporting the opportunities of academic development for health center personnel.

In actual practice, the collection of data should examine the relationships of variables that affect the decision to study the development of human resource in public health field and use logistic regression to control other variables in the data analysis. The results can be used for further improvement of systematic personnel management.

3. The questionnaires should test the quality of the tools and be tested for their validity and reliability before actual use.
4. To make sure that the information for strategic planning can survive in the long term, we should study in detail the expectation of ideal management. The data collected in the data exercise should determine the actual needs of personnel in supporting for academic development. Some results may be used to for improve the management. An analysis of the gap should be done with a sample large enough to represent all Chon Buri health center personnel.

4.4.7 The Limitation of this study

4.4.7.1 Characteristic: The weighted gap method has shortcomings which future study should seek to rectify. For one thing, the method does not measure whether personnel will continue to attend or recommend about their work even if it continues to disappoint them on any of the dimensions.

4.4.7.2 Timing: The time of study – two to three months – was too brief.

4.4.8 The Methodologies are :

The target groups can be categorized into three groups:

1. The command group to monitor the quality of health center personnel such as the chief of CPHO, the chief of district health office, the persons who have authority in administration. Data from this group will be collected through interviews with notes and tape recorders.
2. The participant group consists of personnel who have experience in developed service. The data will be collected through interviews with notes and tape recorders.
3. The stakeholder group are health center personnel under command of CPHO. Data from this group is collected through questionnaires.

To collect quantitative data, the student will focus on the stakeholder group. The research strategy is by survey and its inquiry purposes are descriptive, explanatory and exploratory. This is cross-sectional research and it is also descriptive research. The samples are probability samples and it is purposive sampling. The sample size is calculated by using the Taro Yamane Table as follows :

$$n = \frac{N}{1+Ne^2}$$

When the significant level is .05 (= .05)

n = sample size

N = population size

e = acceptable error

The population size can be collected from the health center personnel framework of CPHO. The sample size should be at least 30% of population size.

After calculating the sample size, the process is to divide the sample in each zone by randomly sample the district health office and divide the sample according to the size of population in each health center again.

The number of questionnaires should be more than the population size, because some questionnaires may not be returned.

The number of questionnaires returned and analyzed should not less than 50%. For tools in analysis, this study will use SPSS (Statistic Package for Social Science) for data entry and to find out frequency, mean, mode in order to know the distribution of data and use the logistic regression to find out the relationship of each factor or each variation.

Questionnaires must be objective and carefully worded. The questions should to brief and easy to understand. The types of questions are close-ended.

Testing the validity and reliability should be done as follows :

The questionnaires are tested for validity by three experts in this topic and tested for reliability by pilot work and analysis by computer.

However, as nothing is perfect, the factors we expect to be perceived as problems are.

1. Questionnaires will be missing, incomplete and returned late or perhaps less than 50% will be returned. The data may lack reliability and cannot represent the whole province. This is a problem which can occur with mailed questionnaires. This method is less effective than the student collecting the questionnaires her self as she did in the data exercise collected 100% of the questionnaires personally. To solve this problem, follow-up letters should be sent out to remind the recipients to complete and return the questionnaires.
2. The second problem which can occur is that some questionnaires are not returned in time. Some questionnaires may come back after believing they were missing.
3. Qualitative data is difficult to collect. The problem is that authorities are usually very busy and appointments have to be postponed. The Director of CPHO, especially, has limited time and is extremely busy.

4.5 Analysis Tools

SWOT Analysis is a tool to analyze the external and internal environmental factors in terms of strengths, weaknesses, opportunities and threats of the organization. It is useful to help develop the health center personnel development system as follows:

1. The analysis of strengths will help planning development and protect from threats outside the organization.
2. The analysis of weaknesses helps develop and transform them from being negative factors to becoming neutral or strengths which helps to decrease threats from outside the organization.
3. The analysis of opportunities will be the method for improving health center personnel management, and at the same time it will help to protect against threats and strengthen weaknesses inside the organization.
4. The analysis of threats prepares the organization during planning development to look for other factors that might diminish its power.

The SWOT Analysis will help encourage successful health center personnel management because of the differing ideas of the stakeholders and the uncertain power of the environmental factors.

4.5.1 Data Analysis : Analysis of The Environmental Factors of CPHO

The data analysis is separated into two parts which are :

- External Environmental Assessment
- Internal Environmental Assessment

4.5.1.1 External Environmental Assessment

Objectives

1. To define the opportunities in the existing environment for proposing improved the provincial supporting and planning for long-term action.

2. To define the external threats in the existing environment and recommended ways to avoid them or to abate their impact

These assessments will look for the relationship of these factors in the past and present situation and predict the future influence.

External environmental factors including those of the stakeholders were analyzed in order to know the opportunities and threats which are useful in management action. This method helps the decision-makers manage the strategy for implementing the policy or program selected by creating the strategy from the interviews nine key personnel.

Table 4.1 Political Factors

Political factors	Affected Channels
1. The Eighth Social - Economic Policy Plan addressed human resource development which could determine the organization's direction. (The Health Development Committee, 1995) MoPH Secretary Office.	1 – 2 are opportunities because the concept of HRD and the MoPH's policy propose to develop health center personnel discipline, practice and skills through academic competition.(O1)
2. The Director of the institute has a policy to advocate academic development for health center personnel by academic competition through The Tenth Annual Health Center Development Project once time a year.	3.This policy may be a threat because the lack of skills in management of Personnel Development sector in each province.
3. MoPH has given autonomy to	

provinces in personnel management appropriate to provincial resources and budgets.	
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Table 4.2. Economic Factors

Economic Factors	Affected Channels
<p>1. The yearly budgets for health manpower listed in the 8th Socio-Economic Plan are: 1997: Bt4.393 billion, 1998: Bt5.663 billion, 1999: Bt6.519 billion, 2000: Bt6.535 billion, 2001: Bt6.758 billion (The Managing Director Committee of the Public Health Development Plan, the 8th Socio-Economic Plan, 1996).</p> <p>2. Changes in the economic structure raised per capita income from Bt2,100 in the year 1961 to Bt68,000 in 1995, a 32-fold increase (The National Committee of Socio-Economic Office, 1996).</p> <p>3. The illiteracy rate fell to 2.59% (The National Committee of Socio-Economic Office, 1996).</p> <p>4. The MoPH would like to increase health insurance from 70% to 100%, and health service to meet a standard of 80 % health care services in</p>	<p>1. The government advocates developing health personnel by increasing the budget every year. Positive financial backing, is another opportunity to establish the training program to develop health care professionals. (O1)</p> <p>2 – 3 Statistics show that the supply of money between 1980-1994 increased (Bank of Thailand), giving people increased purchasing power and more opportunities for education, good health care and a more comfortable life in general. They expect high quality in health care services (The Health Development Committee, 1995). This is a good opportunity to improve health care service. (The Health Development Committee, 1995). (O2)</p> <p>4. The government implemented the insurance program for people</p>

<p>Thailand through systematic, continuous production and development of health care. (The Health Development Committee, 1995).</p> <p>5. Thailand's economic collapse since 1996 impacts the National Development Plan. Many budgets were cut in order to alleviate the economic in Thailand (The National Committee of Socio-Economic office, 1996).</p>	<p>working in companies, industry and factories to protect the quality and equity of care for clients. This also is an opportunity for the health center personnel development program to improve capacity in the quality of care (O3)</p> <p>5. The budgets for human resource development have to be carefully used for their ultimate benefits. Thus, development always emphasizes on administratively dealing with economic problems and decreasing expenditures in lower level development (The Health Development Committee, 1996) (T1)</p>
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Table 4.3 Socio-demographic

Socio –demographic	Affected Channel
1. The census showed a population increase from 56,303,273 in 1990 to 59,095,419 in 1994 (National Statistic	1. Rapid changes in society initiate competition and changes in the way of life, ideas, attitudes and behavior in

<p>Office, 1995), an average increase of 689,000 people per year.</p> <p>2. Government and private health services expanded rapidly in 1993.</p>	<p>order to survive, leading to inequity. (O2)</p> <p>2. There was a shortage of health care personnel as shown by Health Resources Statistics (National Statistic Office, 1995).(T2)</p>
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Table 4.4 Technology

Technology	Affected Channels
<p>1. Technology is increasing in complexity interms of machines, equipment and techniques network of technology. Moreover, changes in technology can determine the direction of socio-economic change.</p>	<p>1. Health care is affected by constant change in many procedures, and people seeking modern health service in urban areas. This is another opportunity to improve the development system and strengthen the capacity of health center personnel in community health work. The Secretary is Office of MoPH during the 10th anniversary of Health Center Development is trying to initiate a project for health center personnel development. (O4)</p>

The results from the external analysis

Opportunities

Opportunity O1 : The high level (National level – 8th Socio-Economic Plan), middle level (The Secretary Office's of MoPH) and local level of political power has opened doors to improve the health center personnel academic development

Opportunity O2 : The financial status of the population, level of education and social-demography have changed, creating a demand for a higher quality of life and expectations of high-quality health care, service and goods.

Opportunity O3 : Numerous technological changes have occurred and continued improvements in equipment and health care techniques are foreseen. This has created a shortage of specialized health center personnel.

Threats

Threat T1 : Although of Thailand's economic collapse diminishes the human resource development budget, the situation is not dire enough justify changes in the policies of the Secretary's Office of MoPH in health center personnel development through provincial economic expenditures and allocation of valuable resources.

However, the external environment advocates improving the opportunities of academic development for health center personnel, but information is insufficient to make an immediate decision. It must be determined that the CPHO is ready to have this. The next step would be to study the internal factors of the CPHO.

4.5.1.2 Internal Environmental Factors

Objectives

1. To define organizational strengths for improving health center personnel academic development opportunities.
2. To define organizational weaknesses to either eliminate them or strengthen them to overcome the threats from outside the organization.

This part identified the Personnel Development Sector's capability and potential to provide the opportunities of academic development for health center personnel. Each part of the provincial level : (management & organization, operations, and finance) was examined.

a. Management and Organization.

1. The Director of CPHO organizes and delegates authority to lower levels by appointing personnel responsible in each area, such as academic, administration, building and workplace, and welfare. In addition, the head of personnel sets up coordinators in each working, branch such as general administration. These are the strengths of the CPHO. The coordinators to know the problems and provide immediate solutions. This shows the organization system can build and maintain competencies to schedule activities and ensure quality-control production (S4).

2. The district health office organization is under provincial departmental planning. The Head of the Personnel Development Sector proposed improving the health center personnel academic development opportunities to the chief of

the District Health Office who agreed. (from interviewing the Head of Personnel Development Sector) (S4).

3. The Head of Personnel Development sector encouraged staff to continue study and go abroad on observation tours to prepare suggestions for the academic development team in product and process for providing health center personnel academic development in the future (S 4).

4. There are many facilities and many expert community health workers for teaching and training health center personnel (S1).

5. The variation in the needs of health care service were plentiful requiring unique community health work procedures which represents an appropriate situation for developing the capacity of health center personnel (S2).

6. The shortage of health personnel in rural areas creates a heavy workload for health center personnel in those areas (W1).

7. There is no coordination between the Personnel Development Sector and the District Health Office. This often results in information which useful as a strategic data base in Health Center Development planning in both practice and learning not being transmitted and need (W2).

8. There is no coordination between the Personnel Development sector and the other sectors in personnel training and academic development (W2).

b. Operations

This part was analyzed in terms of development capabilities and productivity of the facilities available in the organization in order to meet the organization's expected objectives.

1. Every year there are health center personnel requests to participate in academic development. Personnel Development staff have experience in academic development setting (S3).

2. Personnel Development staff have participated with mobile academic development and they have also participated with regional academic development, so they know the situation, the problems, and the need for improving health center personnel academic development in Chon Buri (S1).

3. The Personnel Development sector is well-known for facilitating academic development (S1).

4. The role of the Personnel Development Sector is not clear in creating or supporting the opportunities of academic development for health center personnel. They lack of coordination with other sectors or organizations in setting provincial academic development or investigate the information use for database and lack of strategic planning skill (W3).

5. The Head of the Personnel Development Sector in CPHO has contact with the Praboromrajchanok Institute of MoPH. This organization has many expert academic members and will support and advocate improving health center personnel academic development in Chon Buri (S 6).

6. The role of community health care workers in rural health care was decreased due to other responsibilities (W3).

c. Finance

The capital structure, profitability, financial planning and the accounting system were analyzed in this part. Moreover, the demands for short and long-term financial planning were focused and evaluated.

CPHO has authority in provincial financial management and derives revenue from the budget allotment for CPHO and from projects in collaboration with academic institutions. CPHO must pay a lot of money for welfare and administration. However, CPHO still has money to reward its personnel once a year by providing money remaining in its budget allocation (S5).

But Thailand's economic collapse in 1997 impacted the budget allocation for many MoPH's projects, especially HRD projects. The budget supporting to local level in human resource development was cut and provides for only administrative development (W5).

However, this project requires a low investment of funds initially because CPHO has enough facilitators and facilities to provide health center personnel development by itself (S5).

The health center personnel need for provincial supporting are high enough and currently about 80% of health center personnel request academic development per year (The Personnel Development Sector Study in 1998). This shows the possibility of long-term planning survival of the health center personnel academic development (S5).

d. Other factors

This will assess the prominent factors at a particular time which influence CPHO.

1. In October 1997, the CPHO contacted the College of Public Health Chulalongkorn University to continue education through the learning at the workplace project and to assist and oversee initiation and exchange of personnel development staff (S6).

2. Chon Buri province is the largest academic-center the eastern region. It has many health academic institutes such as the Maternal and Child Health Promotion Center, T.B.Zonal Center , Cancer Zonal Center, Sirindhorn College of Public Health, Chon Buri Nursing College Health and Burapha University (S1).

Strengths

1. Chon Buri Province is the largest academic center of the Eastern Region.

Therefore, the Ministry of Public Health provides expertise through specialized training to assist health personnel in discipline, practice and training (S1).

2. There is a wide variety of academic development activities (S2).

3. There are current academic development programs in CPHO which is well-known in facilitating such programs (S3).

4. The manager of the CPHO Personnel Development sector supports health center personnel academic development (S4).

5. CPHO has authority over financial administration (S5).

6. CPHO regularly contacts the Praboromrajchanok Institute and other academic institutions which support the idea of a health center personnel development (S6).

Weaknesses

1. Shortage of health center personnel (W1).
2. Lack of coordination between the Personnel Development sector and the district health office and the academic sector (W2).
3. Unclear role of the Personnel Development staff in creating or supporting the opportunities of academic development for health center personnel and lack of skill in strategic planning (W3).

4.5.2. The Process of Strategic Plan Formulation

Analysis starts with the external environment. The listing of external threat (T) may be of immediate importance to an organization as some of these threats (such as the lack of available energy) may seriously threaten the operation of the organization. These threats should be listed in box "T" in Table 1.1. Similarly, opportunities should be shown in box "O" (Dyson, 1990).

4.5.2.1 Discussion and conclusion from the results of analysis

The External Opportunities are :

1. Both the policy of the 8th Socio-Economic plan concerning human resource

development and the managers support the program.

2. People expect high-quality service, a result of the impact of socio-economic and Basic Minimum Needs change (WHO, 1995).

3. A shortage of community health workers has been caused by the rapid expansion of government and private hospitals. The number of such workers is predicted to decline at an estimated 5% per year.

The External threats are : Thailand's economic collapse reduced the human resource development budget.

The Internal Strengths are :

1. The facilities and many experts in community health work show CPHO's capacity in the management of health center personnel development.

2. There is excess of academic development, and a variety of health care procedures, hi-tech equipment and modern facilities. The facilities can support high quality development strategies.

3. The facilities permit the conduct of on-going management. This program requires low investment because CPHO has facilities already and requires only the development Personnel Development staff competencies management skills.

4. The top managers advocate this intervention.

5. CPHO has strong financial rewards and a bonus to all staff every year.

CPHO can financially support this intervention under the appropriate limitation.

6. There is contact with the stakeholders. CPHO will be helped from the academic institutes to develop the system.

The Internal weaknesses are :

1. A shortage of information used for the database in development planning.
2. Lack of internal coordination. Sometimes, the Personnel Development sector presents information to other sub-organizations or provincial sectors before development program implementation. Because of this, some work cannot continue or sometimes confused.
3. The role of Personnel Development is not clear and there is a lack of strategic planning skill. The Personnel Development staff functions sometimes are misdirected and staff completes jobs that do not need to be done .

Table 4.5 The positive and negative factors of the Personnel Development Sector

	Positive	Negative
External	<p>Opportunities O1, O2, O3 (pg.)</p>	<p>Threats T1, T2 (pg.)</p>
Internal	<p>Strengths S1, S2, S3, S4, S5, S6 (pg.)</p>	<p>Weaknesses W1, W2, W3 (pg.)</p>

4.5.3 Suggestions for implementation strategies

Combining these factors requires aid to systematize these choices and facilitate the matching of external threats (T) and opportunities (O) with the internal weakness (W) and strengths (S) of the organization (Dyson, 1990)

This process lists the distinct strategies in which we match the information or factors that we have gathered and identified and set the priorities of those strategies for the time available.

1. Strengths/opportunities

This part contains the strongest and most useful strategies for improving the health center personnel development system in Chon Buri.

1.1 S3, S4/O1, O2; The CPHO supports reorganizing the management of health center personnel development in Chon Buri because it is a human resource development program directed to the health field. The health center personnel development directly responds to the objectives of the MoPH Secretary's office.

1.2 S1, S2/O2, O3; Capable of producing health center personnel development strategies personnel in the long term.

2. Weaknesses/Opportunities

Weaknesses can be reduced or eliminated by focusing on the opportunities. At the same time, managers strengthen their organization and contact the stakeholders.

2.1 W1/O1; Propose the existing system of development to upper management for consideration, provide the information and at the same time contact participants.

This strategy should be proposed to management by the head of the Personnel Development sector. In addition, management should contact the Praboromrajchanok Institute to provide expert community health workers to collaborate with this intervention.

2.2 W2/O1, O2; Contact participants

This strategy is to contact the Praboromrajchanok Institute of MoPH as the future resource for academic development.

2.3 W3/O1, O2; Consult the participant's expertise.

The Personnel Development Sector should contact the Praboromrajchanok Institute and discuss the role of health center personnel and expose it to other people in order to perceive the importance of health center personnel.

3. Strengths/Threats

They should use the strengths of the organization to eliminate threats in order to increase perception.

3.1 S1, S3, S4, S6/T1; Adjust the Personnel development sector role to focus on strategies planning for health center personnel academic development.

4. Weaknesses/Threats

This part weakens the strategy, so we should strive to transform or eliminate the organization's weaknesses.

W1, W2, W3,/T1,T2: Adjust the Personnel Development sector role by consulting expert stakeholders.

Table 4.6 Tactics of creating implementation strategies implementation

	Internal Strengths(S)	Internal Weaknesses(W)
External Opportunities (O)	Maxi-Maxi (S/O) S3,S4/O1,O2, S1,S2/O2,O3	Mini-Maxi(W/O) W1/O1, W2/O1,O2, W3/O1,O2.
External Threats (T)	Maxi-Mini (S/T) S1,S3,S4,S6,T1, S1,S2,S3,S6/T2	Mini-Mini (W/T) W1,W2,W3/T1,T2

Strategy and Tactics to Decrease Threats

The strategy for making a proposal should mention the policy of the MoPH Secretarial Office which has more power than Praboromrajchanok Institute.

Strategies and Tactics to decrease the weaknesses of the CPHO organization.

1. S3,S4,S5,S6/W1; Eliminate Personnel Development sector external and internal organization problems.
2. S1,S2,S6,S7/W2; Consult experts who have experience in community health work and management.

3. S4,S6/W3; Consult the assembly of provincial academic institutions and collaborate with academic experts.

4.6 Conclusion

The TOWS matrix is one tool for analysis. This is a systematic method for matching environmental threats and opportunities with an organization's weaknesses and strengths. This process is specifically aimed at generating strategic options, so that its primary purpose is to strengthen strategic option formulation (Dyson, 1990)

Gap Analysis will offer a disciplined methodological approach for strategies to improve management problems by analyzing the environmental. It's an in-depth comparison of the data generated during the performance audit with data requisite for executing the strategic plan. It's a reality test which requires the development of specific strategies to close each gap identified. Then it will provide the answer to the question of whether the skills and resources at hand are sufficient to close the gap to achieve the future within the proposed period.

Analysis of Chon Buri health center personnel academic development internal environmental factors found that there were more strengths than weaknesses. CPHO is prepared for supporting which is an appropriate venue for development methodology. Although a shortage of personnel exists, if job descriptions of health center personnel responsibilities are specific and clearly

separated from other responsibilities, unnecessary or redundant duties would decrease.

The summarization of a strategic plan for successful implementation of the health center personnel academic development.

1. Use the opportunities outside and strengths inside the organization to purpose health center personnel academic development (O/S) by:
2. Recommended Strategy: Reorganizing the system of academic developing health center personnel by emphasizing personnel participation and focusing health center personnel development on community health care.
3. Use the opportunities outside the organization to protect it from threats outside the organization (O/T) by :
4. Recommended Strategy: Referring to and using National and MoPH's Secretarial Office MoPH policies where are they more powerful.
5. Use opportunities outside the organization to strengthen weaknesses inside the organization (O/W) by:

Recommended Strategy: Adjust the role of Personnel Development sector in creating and supporting the opportunities of academic development for health center personnel by proposing the existing strategies of development to upper management for consideration, providing information to the participants, and at the same time contacting stakeholders, and consulting experts to organize the role of health center personnel.

1. Use the strengths inside the organization to protect against threats from outside the organization (S/T) by:

Recommended Strategy: Adjusting the role of health center personnel to focus on community health work and appointing expert stakeholders as consultants.

4.7 Limitations of this study

1. In-depth, detailed information cannot catch up. High level management information is moved and changed frequently and very quickly.
2. The skill limitation, the skill and technique in gathering the movement and information should be reduced through practice.

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