

CHAPTER 4

RESULTS

According to the conceptual framework presented in Chapter 2 (Figure 2.7), this study modified the Balanced Scorecard used in business organizations for use with health-promoting organizations at the team level. The Balanced Scorecard was used as the performance measurement system. Team performance indicators were formulated through this performance measurement system. Meanwhile, the inputs for formulating team performance indicators consisted of: (1) teams' mission and outcomes and (2) team knowledge in terms of how teams perform and how teams learn. The provincial health-promoting teams in the 'Sweet Enough Network' were purposively selected as samples. Based upon the organization development, research process was divided into four steps as follows:

Step 1: Clarification of teams' missions and of the outcomes of Thai health-promoting teams;

Step 2: Identification of team knowledge, which included how teams perform and how teams learn;

Step 3: Generation of team performance indicators for Thai health-promoting teams;

Step 4: Verification and selection of team performance indicators for Thai health-promoting teams.

Each step required differently sampling, instruments, quality control, data collection and data analysis as described in Chapter 3.

This chapter is organized into two parts. The first part describes the research process in terms of (1) general information on the samples in each step and (2) consideration of the research process. The second part reveals the research results and analysis of each step.

Part 1 (1): General information on the samples in each step

Step 1: Clarification of teams' missions and of the outcomes of Thai health-promoting teams

The first step was to clarify teams' missions and the outcomes of the health-promoting teams. In this study, teams' outcomes were identified to represent team effectiveness. To collect the data, samples were selected by using a purposive sampling procedure. The inclusion criteria to select the health-promoting teams from the 'Sweet Enough Network' were: (1) teams that had been members of the 'Sweet Enough Network' for at least three years and (2) team leaders who worked in the Provincial Public Health Offices. From 19 provincial health-promoting teams in 2007 (The Sweet Enough Network, 2006; 2007; 2008), the six teams of Lampang, Phrae, Saraburi, Ratchaburi, Nongkhai and Nongbualamphu were included as samples. In addition, the core team managers were included to clarify their experience to manage the provincial health-promoting teams. Thus, 16 key informants, consisting of four leaders from the core team and 12 health-promoting leaders from six provincial health-promoting teams, were selected. General information on these key informants is presented in Table 4.1. The researcher interviewed each key informant during the

period July 2007 to April 2008. In addition, the triangulation technique was used to control the quality of data by additionally collecting data from (1) participant observation in eight meetings and two learning fora, which were formed by both the core management team and the provincial teams, and from (2) review of 36 relevant documents.

Table 4.1 General information on the 16 key informants, from in-depth interviews

Key informants	Age	Gender	Background	Highest level of education	Working experience (years)	Working experience with the 'Sweet Enough Network' (years)
CT1	54	Female	Dentist	Master degree	29	5
CT2	48	Female	Dentist	Master degree	23	5
CT3	45	Male	Pediatrician	Master degree	20	4
CT4	45	Male	Communicator	Doctoral degree	20	4
NB1	42	Female	Dentist	Master degree	17	3
NB2	41	Female	Dental nurse	Bachelor degree	19	3
NK1	42	Male	Dentist	Master degree	17	3
NK2	32	Female	Dental nurse	Bachelor degree	10	3
PR1	45	Female	Dentist	Bachelor degree	20	3
PR2	27	Female	Dentist	Bachelor degree	3	3
PR3	36	Female	Dental nurse	Master degree	14	3
LP1	39	Female	Dentist	Master degree	15	3
LP2	41	Male	Public health officer	Master degree	19	3
SB1	36	Female	Dentist	Master degree	12	3
SB2	50	Female	Dental nurse	Bachelor degree	28	3
RB1	50	Female	Dentist	Master degree	25	3

In addition, the researcher informally interviewed 17 team partners involved in 11 best practice cases from six provinces between May 2008 and July 2008 to confirm the provincial health-promoting teams' performance in the partner perspective. Seven school administrators, five school teachers and five community leaders were selected purposively as key informants (Table 4.2).

Table 4.2 General information on the 17 partners, from informal interviews

Key informants	Gender	Position	Working experience with the 'Sweet Enough Network' (years)
SCA1	Male	School administrator	3
SCA2	Male	School administrator	3
SCA3	Male	School administrator	3
SCA4	Male	School administrator	3
SCA5	Female	School administrator	3
SCA6	Male	School administrator	3
SCA7	Male	School administrator	3
ST1	Female	School teacher	3
ST2	Female	School teacher	3
ST3	Female	School teacher	3
ST4	Female	School teacher	3
ST5	Female	School teacher	3
CL1	Male	Community leader	3
CL2	Male	Community leader	3
CL3	Male	Community leader	3
CL4	Male	Community leader	3
CL5	Female	Community leader	3

As well, the triangulation technique was used to control data quality by the researcher's participating in eight meetings and two learning fora. In one learning forum which occurred from 29 April to 1 May 2008, the researcher also acted as a facilitator of the forum for 12 groups, which included 105 participants from 20 provincial health-promoting teams. The participants consisted of 19 health-promoting team leaders, 61 team members and 25 team partners.

The results of this step revealed teams' missions and outcomes.

Step 2: Identification of team knowledge, which included how teams perform and how teams learn

In the identification step, the researcher interviewed all of the 16 key informants regarding team knowledge during the same interview used in Step 1 to clarify the teams' missions and outcomes. In addition, the triangulation technique was

used to control the quality of data by additionally collecting data from participant observation in five meetings and one learning forum and from twenty-nine relevant documents.

The results of this step uncovered team knowledge which refers to (1) how Thai health-promoting teams perform and (2) how Thai health-promoting teams learn. By using the organizational structural design described by Cummings & Worley (2001, pp. 280- 369), the techniques of how teams perform were classified into five categories: (1) team tasks, (2) team work design, (3) team composition, (4) team process and (5) team support systems. Meanwhile, Garvin's learning theory was used as a framework for identifying the techniques of how Thai health-promoting teams learn through two types of learning and through leadership challenge. The two types of learning were (1) intelligence gathering, which includes search, inquiry, observation and (2) experience, which refers to reflection and review. The leadership challenge involved (1) creating opportunity, (2) setting the tone and (3) leading the discussion. These techniques of team knowledge were used as inputs to formulate team performance indicators for health-promoting teams in Step 3.

Step 3: Generation of team performance indicators for Thai health-promoting teams

Following the conceptual framework for generating team performance indicators for Thai health-promoting teams, which was developed in Chapter 2 (Figure 2.7), the researcher formulated team performance indicators from (1) teams' missions and outcomes, (2) the techniques of how Thai health-promoting teams perform and (3) the techniques of how Thai health-promoting teams learn. All of the

inputs were analyzed, synthesized and used to generate the first set of team performance indicators for Thai health-promoting teams.

The result of this step was the first set of team performance indicators for Thai health-promoting teams.

Step 4: Verification and selection of team performance indicators for Thai health-promoting teams

In the verification and selection step, which was the final step, a peer review technique was used. Questionnaires were sent purposively to six provincial teams. These provincial health-promoting teams included Lampang, Phrae, Saraburi, Ratchaburi, Nongkhai and Ubon Ratchathani. The Nongbualamphu team was excluded and replaced by the Ubon Ratchathani team because the Nongbualamphu team was no longer a member of the network when this step in the data collection was performed. The experience of the Ubon Ratchathani team was similar to that of the other teams. The 17 samples answering the questionnaire consisted of eight health-promoting team leaders, three team members, three team partners and three coaches. These people joined the network more than three years before the study was begun, and were willing to answer the questionnaire. The period for collecting data from the questionnaire was between November 2008 and January 2009. After the completed questionnaires were returned, the researcher, in January and February 2009, informally interviewed eight provincial health-promoting team leaders who responded to the questionnaire, by using the five questions identified in Appendix E. Finally, a focus group discussion occurred in August 2009 for one health-promoting team,

which consisted of one health-promoting team leader and 10 team members. The details of data collection in this step are presented in Table 4.3.

Table 4.3 General information on key informants in the verification and selection step

Data collection methods	Key informants	Gender	Background	Position	Working experience with the 'Sweet Enough Network' (years)
Peer review by using questionnaire	NK1	Female	Dental nurse	Team leader	3
	PR1	Female	Dentist	Team leader	3
	LP1	Female	Dentist	Team leader	3
	LP2	Male	Public health officer	Team leader	3
	SB1	Female	Dentist	Team leader	3
	SB2	Female	Dental nurse	Team leader	3
	RB1	Female	Dentist	Team leader	3
	UB1	Female	Dentist	Team leader	3
	NKM1	Female	Dental assistant	Team member	3
	PRM1	Female	Dental nurse	Team member	3
	LPM1	Female	Dental nurse	Team member	3
	NKP1	Female	Community leader	Team partner	3
	PRP1	Female	School teacher	Team partner	3
	UBP1	Female	School teacher	Team partner	3
	C1	Female	Dentist	Coach	3
	C2	Male	Dentist	Coach	3
C3	Female	Dental nurse	Coach	3	
Peer review by using informal interview	NK1	Female	Dental nurse	Team leader	3
	PR1	Female	Dentist	Team leader	3
	LP1	Female	Dentist	Team leader	3
	LP2	Male	Public health officer	Team leader	3
	SB1	Female	Dentist	Team leader	3
	SB2	Female	Dental nurse	Team leader	3
	RB1	Female	Dentist	Team leader	3
	UB1	Female	Dentist	Team leader	3
Peer review by using focus group discussion	L1	Male	Dentist	Team leader	1
	LM1	Female	Dental nurse	Team leader	1
	LM2	Female	Dental nurse	Team member	1
	LM3	Female	Dental nurse	Team member	1
	LM4	Female	Dental nurse	Team member	1
	LM5	Female	Dental nurse	Team member	1
	LM6	Female	Dental nurse	Team member	1
	LM7	Female	Dental nurse	Team member	1
	LM8	Female	Dental nurse	Team member	1
	LM9	Female	Dental nurse	Team member	1
LM10	Female	Dental nurse	Team member	1	

The final result illustrates the critical team performance indicators for Thai health-promoting teams.

Part 1 (2): Consideration of the research process

In each step, data was collected from the key informants, who had various backgrounds and met the criteria for participation in the study by virtue of their experience, especially working experience with the 'Sweet Enough Network'.

However, many problems occurred during the study. Making appointments to interview key informants was not easy, because all of the key informants were very busy with their routine work, and each interview took at least one hour for each person. In addition, each team was located in different parts of Thailand. The researcher had to travel to meet them in different provinces. The researcher had to prepare the interview questions for both the clarification and the identification steps so that they could be asked during the same interviews. There were two reasons to interview key informants regarding both steps at the same time. Firstly, the researcher did not want to disturb the key informants' time unduly. Secondly, the cost of travelling for a separate interview was high. However, the prior good relationships between the researcher and the key informants helped the researcher to make an appointment with them at their available time. Most of the key informants were interviewed in the evening, after working hours, at places convenient for them, for instance at their offices or at restaurants. The researcher also asked their permission to record the interviews. Nevertheless, one of the recordings failed because of a failure in the recorder; the researcher had to ask the key informant to write the answers to the interview questions and send them to the researcher by using the internet. During each

interview, the researcher did not take notes. On the other hand, the researcher took notes of the important aspects of each key performance after each interview.

As well, there were similar problems with the appointments to interview partners as there were with those with the key informants, since the partners were also busy with their routine work. However, the researcher asked the provincial team leaders for some help in making appointments for the researcher to meet with the partners. Each interview took approximately twenty minutes. Most partners were interviewed at places convenient for them, for example, at their villages or at their offices, either during working hours or in the evening. However, general information, such as age, background and their highest level of education was not included in the interview.

Moreover, the researcher had to identify all the scheduled meetings and seek permission from the key informants to attend and observe as many meetings and learning fora as possible. The meetings and learning fora occurred in different places; therefore, the researcher had to plan carefully to attend each meeting and learning forum. During the meetings and learning fora, the researcher identified herself as a Ph.D. student and clarified the objective for attending the meetings and learning fora with both the key informants and participants. Some meetings and learning fora were recorded but the researcher took notes at every meeting and learning forum. For one learning forum, which occurred from 29 April to 1 May 2008, the core management team of the 'Sweet Enough Network' and the researcher jointly planned the forum. The core management team also assigned the facilitator role for this forum to the researcher. The researcher acted as a participant in other meetings and learning fora.

Furthermore, the researcher collected many documents for analysis. The difficulties in gathering them were (1) the relevant documents were kept in many places and by many people, (2) some were not completed for this study, (3) some were not published and (4) some were confidential and could not be disseminated. The researcher also had to locate the documents and ask permission from the people who were responsible for each document to use or view them.

In the verification and selection step, the researcher gathered feedback from the questionnaires. The researcher asked secured the consent of the samples to respond for feedback before sending the questionnaire to them. However, some of the samples did not respond and some of the returned questionnaires were not completed; the researcher had to exclude them. After the completed questionnaires were returned, the researcher informally interviewed eight provincial health-promoting team leaders who responded to the questionnaire. There was no trouble in this process. Finally, the focus group discussion was scheduled to set priorities for the first set of indicators, and to select the critical indicators. The researcher requested some help from one provincial team. Team leader helped the researcher by integrating the focus group discussion in the provincial meeting. This focus group discussion took approximately one hour.

This study used different sampling methods, samples, instruments and data collection methods. Each step was described step by step as presented. In-depth interviews, participant observation, documentary analysis and peer review were the methods for collecting data. The core team managers, provincial team leaders, team members and team partners were the samples in different steps. Though, many

problems occurred during this study, all of them were solved with much help from everybody involved in this study.

Part 2: Research results and analysis

Step 1: Clarification of teams' missions and of the outcomes of Thai health-promoting teams

The process of modifying the Balanced Scorecard used in business organizations for teams started with the clarification of teams' missions and outcomes. In this study, teams' outcomes were identified to reflect team effectiveness. The researcher reviewed secondary data from 36 relevant documents and made field notes from participation in ten meetings and learning fora which were formed by both the core management team and the provincial teams. The health-promoting teams' vision, missions and outcomes are shown in Table 4.4.

Table 4.4 Health-promoting teams' vision, missions and outcomes

Vision	Working with partners who target children and youth to protect children from illnesses that result from excess sugar consumption and to promote healthy eating lifestyles from birth to the teen-age years (early teenage – primary school) by creating food literacy among manufacturers, local governments, school administrators, teachers, parents/guardians, and children, to foster understanding and realization of the effects of excess sugar consumption, to the point that children are able to choose nutritious foods and drinks that are 'sweet enough'
Missions	<ul style="list-style-type: none"> • Create demands and participation of alliances and partners • Set up healthy public policy / regulation
Outcomes	Change in people's behavior and health, focused on reducing sugar consumption

The network's vision focused on reducing sugar consumption by working with partners, and teams' outcomes emphasized change in people's behavior and health.

The development process of the network's vision, missions and outcomes is described as follows:

In regard to team learning, since 2003, there has been no evidence showing the network's vision, missions and outcomes. The core management team of the network established the first vision, missions and outcomes during a workshop for the outcome mapping technique in May 2007. ThaiHealth adopted this technique for evaluating selected projects, one of which was the 'Sweet Enough Network'. However, the core management team did not communicate these first vision, missions and outcomes to the provincial teams.

In April 2008, a learning forum was established to share the vision and to review the previous activities and outcomes of teams, including revising future tasks and plans. The participants were team leaders, team members and team partners. The forum found that both individuals and teams were concerned with working with partners as a network to reduce sugar consumption in target groups. They also required learning and supportive resources. The network's vision, missions and outcomes emerged at the team level.

In August 2008, the core management team reconsidered and adjusted the vision, missions and outcomes for presentation to ThaiHealth before signing a new contract with ThaiHealth.

In September 2008, the new vision, missions and outcomes were presented in both the coaching team meeting and the meeting of the provincial teams as shown in Table 4.4.

The process of developing the provincial health-promoting teams' vision, missions and outcomes showed that team members participated in the process. In accordance with the triangulation technique for validating teams' vision, missions and outcomes at the team level, the researcher interviewed 17 team partners from 11 best practice cases. The results confirmed that the provincial teams understood and achieved the missions and outcomes. The provincial teams also worked with their partners to advocate and mobilize society via campaigns for reducing sugar consumption.

Furthermore, the results from the learning forum which occurred from 29 April to 1 May 2008 illustrated that the participants concurred with the teams' vision, missions and outcomes. As well, the researcher interviewed all of the 16 key informants, who were four leaders from the core management team and 12 health-promoting leaders from six provincial health-promoting teams. The results confirmed that all of the interviewees reflected the same vision, missions and outcomes.

The analysis of teams' missions and outcomes

The development process for the vision, missions and outcomes for health-promoting teams was used the participation process. The results illustrated that the development process was clarified and gained consensus from team members. The process followed the strategic management process of the Balanced Scorecard (Kaplan & Norton, 1996b).

The key words of vision are "working with partners to reduce sugar consumption by creating food literacy." Teams had to work together with their partners to achieve the missions. However, the main partner of each provincial team

was different. The team leaders had different working experiences in different contexts of the Provincial Public Health Offices. As well, teams' outcomes were changes in people's behavior and health, focused on reducing sugar consumption.

The results from interviewing 17 partners confirmed that the provincial teams not only developed networking based on participation of partners but also, at the same time, established healthy public policy through their network. New knowledge emerged as innovations and best practice models in terms of changes in people's behavior and health, focused on reducing sugar consumption. These results validated that the provincial teams realized vision, missions and outcomes. Furthermore, the same results were discovered from the learning forum which was held from 29 April to 1 May 2008 and from the answers of interviewees. Teams' vision, missions and outcomes were employed as guidelines for teams to plan their actions and implementation. In addition, teams' vision, missions and outcomes confirmed the health promotion concepts proposed in the Ottawa and Bangkok Charters (World Health Organization, 1986; 2005). The concept refers to promoting health and acting to advocate, invest, build capacity, regulate, legislate and partner (World Health Organization, 1986; 2005)

According to the Balanced Scorecard, vision is the most important focus in business (Kaplan & Norton, 1996a; 1996c: p. 167-189). Meanwhile, Wisniewski & Olafsson (2004), Niven (2003, p.158) and Kaplan (2004, p.8) proposed that the focus turn to the missions in non-profit organizations. The Thai health-promoting teams in this study represented non-profit teams. So, teams' missions, rather than their vision, were considered to indicate team performance.

The results confirmed that the vision, missions and outcomes at the team level were the same as those at the network level. Thus, teams' missions in this study were (1) to create demands and participation of alliances and partners and (2) to set up healthy public policy/regulation. Meanwhile, teams' outcomes covered changes in people's behavior and health, focused on reducing sugar consumption. These results were used to formulate indicators. The researcher formulated the indicators that reflected teams' missions and outcomes to indicate team effectiveness (Table 4.5). Seven indicators reflected teams' missions, whereas two indicators reflected team outcomes.

Table 4.5 Formulated indicators for reflecting team performance indicators from teams' missions and outcomes

Themes	Details	Formulated indicators for reflecting team performance
Team missions	Create demands and participation of alliances and partners	<ul style="list-style-type: none"> ▪ Number of old partners ▪ Number of new partners ▪ Number of partners involved in activities/ planning processes ▪ Partners' satisfaction level with the team ▪ Percentage of budget contributed by partners
	Set up healthy public policy or regulation	<ul style="list-style-type: none"> ▪ Number of sustainable healthy public policies/ regulations ▪ Number of new healthy public policies/ regulations
Team outcomes	Emphasize change in people's behavior and health , focused on reducing sugar consumption	<ul style="list-style-type: none"> ▪ Target group behavior identified by survey (Note: the survey included dietary and food consumption) ▪ Percentage of target group (children) who consume 6 teaspoons or less of sugar per day

Besides, to react to teams' missions, how Thai health-promoting teams perform and how teams learn are identified and described as team knowledge in Step 2.

Step 2: Identification of team knowledge, which included how teams perform and how teams learn

The results of how Thai health-promoting teams perform

Following the content analysis and thematic extraction as the methods to analyze the data from the interview which were described in Chapter 3, team leaders reflected their experience of how their teams perform. The results show that how each team performs was reflected in terms of technical knowledge or “know-how.” Based on the organizational development approach, five categories of organizational structural design have been suggested (Cummings & Worley, 2001, pp. 280- 369). These categories consist of (1) team tasks, (2) team work design, (3) team composition, (4) team process and (5) team support systems. In this study, each category involved “how-to” knowledge or technical knowledge of how Thai health-promoting teams perform. The details of each category are described as follows.

- **Team tasks**

In this study, team tasks referred to the particular activities that teams must accomplish. Each team leader volunteered to confront the health issue of reduction of sugar consumption as an extra task beyond their routine duties. They gave many reasons why they considered joining the network (Table 4.6). Team tasks were clarified before each team launched the program. The tasks were repeated in every

provincial health-promoting team meeting which was set up two times per year by the core management team. Each team recognized that their significant tasks were to reduce sugar consumption and to build health-enhancing public policies. They also became aware of working with partners. However, each provincial team elected to work with different partners, depending on their relationships in their provinces as shown in Table 4.6.

Furthermore, team's missions and outcomes were proposed by the core team managers via the provincial health-promoting team meeting. Each provincial team transferred all of the team's missions and outcomes, including team tasks, to their team members through the provincial team meetings, which were scheduled regularly by team leaders every three or four months. In some meetings, team leaders also set the agenda to include monitoring team tasks. Team members reported their outputs, including problems. Everybody discussed and helped each other to solve the problems. The reflection of the team leaders on the missions and outcomes illustrated that the team leader and team members evidently understood the team's missions and outcomes, including their tasks. The significant technique for clarifying team tasks was "set up the meeting regularly" at both the network level and team level.

Table 4.6 Reasons for joining the network and the main partners of the selected provincial teams

Provincial teams	Reasons for joining the network	Main partners
Nongbualamphu	<ul style="list-style-type: none"> • The health issue of the network helped dental personnel to perform other tasks and to link our tasks to other professions and partners. Participation and learning by doing were real actions after they joined the network. • The gimmick, “Why do ants have no teeth?” attracted people. Everybody was interested in finding out the answers. 	Communities
Nongkhai	<ul style="list-style-type: none"> • The process of actions depended on the decision-making of the provincial team. Each provincial team was able to set its targets and outcomes in its own context. • This network gave the provincial team the opportunity to coordinate and deal with other professions and partners. Participation increased after joining the network. 	Child care centers
Phrae	<ul style="list-style-type: none"> • According to the old concept, every task from the Division of Dental Health, Ministry of Public Health was designed by the Division and had to be followed step by step. However, the network was different. The provincial team designed and organized each step autonomously. • The participation concept was obvious and was a challenge. • The network’s objective was the same as the provincial task. • Campaigning by using a mascot was interesting to mobilize people to change their behavior. 	Primary schools
Lampang	<ul style="list-style-type: none"> • This network used new approaches to deal with oral health problems. Volunteer and participation concepts are different from routine work. • How to manage the budget is more flexible than routine government budget management. 	Local administrations
Saraburi	<ul style="list-style-type: none"> • Changing roles from actors to coordinators and facilitators was challenging. • Participation was used for persuading and motivating partners. 	Primary schools
Ratchaburi	<ul style="list-style-type: none"> • This network helped the provincial team to connect with other groups of people who worked for the same issue. • The provincial team was able to run its tasks autonomously. 	Primary schools

- **Team work design**

Team work design in this study was defined as how team leaders design their teams for accomplishing the tasks. After committing to join the network, each team designed the process by their own decisions. Team leaders reflected that they managed their teams autonomously as self-directed teams. They took responsibility for the whole process from planning to evaluation. The core team managers designed the outcomes; however, the process was created independently by each provincial team, for example:

- The Nongbualamphu team created teams at the district level by asking health personnel in each district to form their own teams. Twelve district teams were formed by volunteers. After that, the Nongbualamphu team leader transferred the network team's tasks to the district teams and established the training courses for these district teams. The courses included how to approach the community and how to deal with the villagers. The leader also scheduled a learning forum once a year for sharing their knowledge and monitoring the outcomes.
- The Phrae team dealt directly with the main partners. The main target partners were the primary schools that used to work together in its previous project.

They worked as intimate friends. The team leader also transferred the network team's tasks and established the training courses. The courses involved how to educate the students to reduce sugar consumption by the "Experimental Activities Planner," or EAP technique, and how to use local wisdom for the students' learning. The main objective of both courses was to integrate the

health issue into the school curriculum. A learning forum was scheduled each year for sharing knowledge and monitoring the outcomes.

- During the Lampang team's first year, the provincial team leader had implemented every activity herself. However, she found that doing everything prevented the inclusion of people at the district level. Therefore, she changed the plan in the second year by asking for participation of people at the district level via the provincial meeting. The team leader established the forum for exchanging and sharing how to deal with the local government to clarify the team's missions and tasks. The first district team emerged to accomplish the tasks in 2006. The district teams also managed their teams autonomously.

The data showed that each provincial team designed its own process from planning to evaluation. The data confirmed that the team work design of Thai health-promoting teams in this study represented self-directed teams. The annual report of each provincial team emphasized the outcomes, whereas only some team reports included the process. However, the process was specifically uncovered in the provincial health-promoting team meetings and learning fora, which were set up by the core management team every year.

- **Team composition**

Team composition in this study represented the heterogeneity of the members of the teams. The provincial team leaders reflected that they were persuaded to join the network by the core team managers. Meanwhile, most of the team members at the provincial team level were dentists and dental nurses who worked at the Provincial

Dental Health Office. Some teams, such as those in Nongkhai, Lampang and Ratchaburi included other health professions from other divisions as team members. These people were the public health officers, nutritionists or nurses. Team size at the provincial team level varied between two and five people, depending on each province's context. However, team leaders at the district level had different occupations from team to team. For example, one of the district team leaders of Nongkhai was a dental assistant whereas the district team leaders of Nongbualamphu and Lampang were the public health officers. Most of the district team members included many professionals, or multidisciplinary people, who had a variety of skills and knowledge. The crucial reason that these people became team members was the health issue, to reduce sugar consumption, matched with their interests. To recruit these people, most of the team leaders at the provincial level persuaded them at the provincial meeting and requested the setting up of the district team to accomplish the tasks. Team leaders at the provincial level used the evidence-based data, for example, the morbidity rate of disease, to persuade other health professionals. They also convinced other health professionals by pointing out the mutual benefits. Everybody could gain benefit from working together. They indicated that working as a team was better than working as individuals. Working as a team helped to reduce each person's workload. For these reasons, other health professionals joined with the team, both at the provincial and the district levels. The important strategy for convincing other professionals both at the provincial and the district levels was that it was a "win-win situation."

- **Team process**

Team process in this study represented how team members work together and how teams achieve their tasks. Team leaders reflected that they used many techniques to drive their teams, for instance:

The first step for managing teams was that most team leaders believed in the relationships between people in their teams. A congenial environment in the team was essential for team members to work together. The creation of a congenial environment depended on communication. The results indicated that informal communication helped to generate sympathetic situations and to close the gap between team leader and team members. For example, the Nongbualamphu and Nongkhai team leaders always informally communicated with team members and created a sociable environment during the provincial meeting. Both Nongbualamphu and Nongkhai team members were able to contact team leaders after working hours. As well, the Phrae team leader facilitated a congenial environment by creating happiness and fun as concepts for teams. Phrae team members also felt comfortable to consult the team leader.

Furthermore, team leaders reflected that each team member was interdependent for mutual benefits on other members. To achieve team tasks, team members helped each other to accomplish the tasks. Both team leaders and team members also attempted to both “give and take an advantage of tasks” from and to each other. For example, some team members’ tasks were not the team leaders’ tasks and team members did not seek any help. However, team leaders considered that they could help to do these tasks; they did not hesitate to help their team members immediately. The same action occurred in reverse to the team leaders. This situation

was found in every provincial team. In addition, they attempted to understand and to employ each other's competence to "put the right man in the right job." They knew each other's competence from their experience because they worked together in the same office for a period of time. When new members were recruited, the old members assigned some tasks and considered their competence from the achievement. This technique was uncovered by the Nongkhai, Phra, Lampang and Saraburi teams.

Both a congenial environment and interdependence support participation. Team leaders reflected that team members themselves required participation in tasks. As the skills in teams varied, team leaders empowered team members to share ideas and to take responsibility for team tasks and activities. The most significant method to empower team members was to create participative opportunities for team members to present how to accomplish team tasks and activities. In addition, most team leaders showed their respect for team members' initiatives and listened to team members' voices, especially during the discussion in meetings. For instance, the Phrae and Saraburi team leaders asked team members to be responsible for some tasks and believed that they were able to take responsibility and made decisions in every step of the tasks. The team leaders did not interfere in the process or activities, unless team members requested help.

To create a learning environment for teams, team leaders set up the learning fora for sharing knowledge regularly. Each Provincial Public Health Office set up a meeting every month for informing, discussing and monitoring the projects or task, depending on their contextual need. The agenda was set by team leaders. After team leaders assigned tasks for team members, they monitored team tasks through the meeting. As well, a learning forum was set up as an extra meeting for sharing

knowledge at least once a year. This process occurred in every provincial team, and at the core management team level. The details of how teams learn are presented in the next part.

- **Team support systems**

Team leaders reflected that the support systems were significant for driving their teams. These systems involved feedback, especially positive feedback. Team leaders provided the feedback through the appreciation of tasks at both individual and team levels. The degree of positive feedback was broad, from words of admiration to organizational and national achievement awards. Such recognition supported an enthusiasm for both teams and partners. For example, the Nongbualamphu team leader received an achievement award from the Provincial Public Health Office. The schools in Phare and Saraburi received awards from the Ministry of Public Health.

As well, the training course was set as the support system for developing personal skills. For instance, the Nongbualamphu team leader designed training courses for team members. The courses involved how to approach the community and how to deal with the villagers. The Phrae team leader created training courses for both team members and partners. The courses included how to educate the students to reduce sugar consumption using an “Experimental Activities Planner” and how to draw out the local wisdom. The Saraburi team leader provided a course for their team members on how to use evidence to mobilize people to change their behavior.

As a result of discussion of these data, the techniques of how Thai health-promoting teams perform emerged, as shown in Table 4.7

Table 4.7 Categories, purposes and the techniques of how Thai health-promoting teams perform

Categories	Purposes	Techniques of how Thai health-promoting teams perform
Team tasks	To clarify teams' tasks, vision, missions and strategies before the launch and during the implementation of the program	By setting up meetings regularly
Team work design	To manage their teams autonomously as self-directed teams	By taking responsibility for the whole process from planning to evaluation
Team composition	To create teams	By recruiting multidisciplinary people, who represented a variety of professions, skills and knowledge
	To convince people to join the team	By pointing out the benefit of joining the team by using evidence and negotiating with a "win-win situation" strategy
Team process	To create a congenial environment	Via informal communication
	To be interdependent on mutual benefits or help each other to do the job	By taking and giving an advantage of tasks
	To manage team members' competence	By understanding and employing their competence to put the right man in the right job
	To empower team members	By showing respect for team members' initiatives and listening to team members' voices
	To create team members' participation	By setting up the opportunity for team members to present how to accomplish team tasks and activities
	To create a learning environment for sharing knowledge	By setting up learning fora regularly
Team support systems	To give support to both individuals and team	By providing positive feedback
	To develop personal skills	By setting up training courses

Moreover, team leaders applied some techniques employed at team level when they dealt with their partners. These techniques reflected how teams perform their missions with their partners. These techniques included:

- Clarify teams' tasks, vision, missions, strategies with partners by setting up meetings regularly;

- Convince partners to join the team by pointing out the benefits through by using evidence and negotiating with a “win-win situation” strategy;
- Create congenial environment with partners via informal communication;
- Be interdependent on mutual benefits or help partners to do the job by taking and giving an advantage of tasks;
- Empower partners by showing respect for partners’ initiatives and listen to partners’ voices;
- Create partners’ participation by setting up the opportunity for partners to present how to accomplish tasks and activities;
- Create a learning environment for sharing knowledge by setting up learning fora regularly;
- Support to partners by providing positive feedback;
- Develop partners’ skills by setting up training courses.

The results in this step illustrated that “how-to” knowledge, or technical knowledge of how Thai health-promoting teams perform in terms of organizational structural design, uncovers five categories and twelve crucial techniques. These techniques were used for driving teams and for dealing with partners. However, each team employed these techniques differently. Table 4.8 presents categories, purposes, the crucial techniques of how Thai health-promoting teams perform and the degree of each technique that was used by each team. The degree of each technique was supported by the data from interviews, participant observation and relevant documents. The researcher described the degrees of the techniques at five levels, depending on the amount of supporting data:

- + represented 1-5 items of supporting data
- ++ represented 6-10 items of supporting data
- +++ represented 11-15 items of supporting data
- ++++ represented 16-20 items of supporting data
- +++++ represented more than 21 items of supporting data

The data showed that every team employed every technique. However, each team used each technique slightly differently, according to the contexts of each team.

Table 4.8 Degree of the techniques of how Thai health-promoting teams perform that were used by each team

Categories	Purposes	Techniques of how Thai health-promoting teams perform	Thai health-promoting teams					
			NB	NK	PR	LP	SB	RB
Team tasks	To clarify teams' tasks, vision, missions and strategies before the launch and during the implementation of the program	By setting up meetings regularly	++	+++	++++	++++	++++	+++
Team work design	To manage their teams autonomously as self-directed teams	By taking responsibility for the whole process from planning to evaluation	+++	++++	++++	+++++	+++	+++
Team composition	To create teams	By recruiting multidisciplinary people, who represented a variety of professions, skills and knowledge	+++	++	++	++	+++	+++
	To convince people to join the team	By pointing out the benefit of joining the team by using evidence and negotiating with a "win-win situation" strategy	++++	++++	++++	++++	++++	+++
Team process	To create a congenial environment	By using informal communication	++++	+++++	+++++	++	++++	+++
	To be interdependent on mutual benefits or help each other to do the job	By taking and giving an advantage of tasks	+++	++	+++	+++	+++	++
	To manage team members' competence	By understanding and employing their competence to put the right man in the right job	+++	+	+	+	+	++

Notes: NB = Nongbualamphu, NK = Nongkhai, PR = Phrae, LP = Lampang, SB = Saraburi, RB = Ratchaburi

Table 4.8 (continued) Degree of the techniques of how Thai health-promoting teams perform that were used by each team

Categories	Purposes	Techniques of how Thai health-promoting teams perform	Thai health-promoting teams					
			NB	NK	PR	LP	SB	RB
Team process	To empower team members and partners	By showing respect for team members' initiatives and listening to team members' voices	+++++	+++++	+++++	+++	++	+
	To create team members' and partners' participation	By setting up the opportunity for team members to present how to accomplish team tasks and activities	++++	+++	+++	++++	+++	+
	To create a learning environment for sharing knowledge	By setting up learning fora regularly	+++	++	++	++	+++	+
Team support systems	To give support to individuals, team and partners	By providing positive feedback	+++	++	++++	+	+	+
	To develop personal skills	By setting up training courses	+	+	+	+	+	+

Notes: NB = Nongbualamphu, NK = Nongkhai, PR = Phrae, LP = Lampang, SB = Saraburi, RB = Ratchaburi

The analysis of how Thai health-promoting teams perform

The results from this step illustrated that six provincial teams were selected from the 19 provincial teams which volunteered to launch the program in 2007 and had three years of experience to work with the 'Sweet Enough Network'. How Thai health-promoting teams perform was identified as team knowledge by following the organizational development approach, in terms of organizational structural design (Cummings & Worley, 2001, pp. 280- 369). The "how-to" knowledge, or technical knowledge of how Thai health-promoting teams perform, was categorized into five

categories, which covered 12 techniques, as shown in Table 4.6. These techniques were used to drive teams and to deal with the partners.

Each category implied a different meaning. Team tasks, team work design and team composition indicated how team members and partners worked together. Meanwhile, team process blended human relations and task-orientated approaches in terms of how to manage teams. Team support systems revealed how to reinforce team performance. These five categories covered how Thai health-promoting teams perform.

The results illustrated that team leaders attempted to push and pull their teams in the right form at the right time in the right situation and conditions. The 12 techniques both were related to team performance and affected the successful implementation of highly-performing teams. These techniques were used as inputs for formulating team performance indicators.

However, the results also showed that the contexts and culture of Thai health-promoting teams distinguished themselves from the business context, especially in the performance of teams. The reflection of team leaders revealed five categories and 12 techniques. It illustrated that Thai health-promoting teams performed specifically in particular terms as follows:

- The tasks of Thai health-promoting teams focused on a specific issue, to reduce sugar consumption and two missions: (1) to create demands and participation of alliances and partners, and (2) to set up healthy public policy or regulations. The outcomes of team tasks emphasized change in people's behavior and health which were non-profit results. The details are described in Step 1. Thai health-promoting teams also followed the World

Health Organization's health promotion actions via four of its means: (1) to build healthy public policy, (2) to create supportive environments, (3) to strengthen community action and (4) to develop personal skills (World Health Organization, 1986). The other means was to reorient health services, which was not among the teams' missions.

- The roles of people in Thai health-promoting teams followed the health promotion concepts of the Ottawa and Bangkok Charters, which emphasized promoting health and acting to advocate, invest, build capacity, regulate, legislate and partner (World Health Organization, 1986; 2005). Important roles included (1) people and community empowerment and (2) comprehensive social and political process (World Health Organization, 1998: p.1). Furthermore, three significant tasks involved (1) to develop strong political action, (2) to expand participation and (3) to sustain advocacy for all sectors, partners and settings (World Health Organization, 2005). These roles revealed how Thai health-promoting teams perform. For example, how team leaders empowered team members and partners were reflected when they showed respect for team members' and partners' initiatives and listened to their voices. They also set up the opportunity for team members and partners to present how to accomplish team tasks and activities to create team members' and partners' participation.
- Thai health-promoting teams volunteered to launch a new health-promoting program. They integrated and adjusted the new issue (reducing sugar consumption) smoothly and successfully into their routine work. The results found that five categories uncovered 12 techniques for team

performance. These techniques represented team knowledge that emerged during their working process. Most of them reflected the specific action to launch the health-promoting program.

Five categories and 12 techniques from health-promoting teams were, therefore, assumed to serve as key success factors for team performance. To indicate team performance, the researcher formulated indicators from these crucial techniques of how Thai health-promoting teams perform, which reflected team performance, as shown in Table 4.9. However, some techniques were reflected by more than one indicator. For example, to manage their teams autonomously as self-directed teams was reflected by three indicators. In contrast, some indicators reflected more than one technique. For instance, the number of old team members pointed out (1) how to convince people to join the team by pointing out the benefit of joining the team by using evidence and negotiating with a “win-win situation” strategy, (2) how to create a congenial environment via informal communication, (3) how to be interdependent on mutual benefits, or help each other to do the job by taking and giving an advantage of tasks, (4) how to manage team members’ competence by understanding and employing their competence to put the right man in the right job and (5) how to empower team members and partners by showing respect for their initiatives and listening to their voices. As well, some indicators overlapped with the set of team performance indicators from teams’ missions and outcomes in Table 4.5, such as (1) number of old partners, (2) number of new partners, (3) number of partners involved in activities/planning processes and (4) partners’ satisfaction level with the team.

Table 4.9 Formulated indicators for reflecting team performance from the techniques of how Thai health-promoting teams perform

Themes	Techniques of how Thai health-promoting teams perform	Formulated indicators for reflecting team performance
Team tasks	Clarify teams' tasks, vision, missions and strategies before the launch and during the implementation of the program by setting up meetings regularly	<ul style="list-style-type: none"> ▪ Percentage of team members that completely understands vision, missions and tasks
Team work design	Manage their teams autonomously as self-directed teams by taking responsibility for the whole process from planning to evaluation	<ul style="list-style-type: none"> ▪ Percentage of activities/planning process generated by team ▪ Number of monitoring and evaluation instances per year ▪ Number of activities/plans adjustments resulting from monitoring and evaluation
Team composition	Create teams by recruiting multidisciplinary people, who represented a variety of professions, skills and knowledge	<ul style="list-style-type: none"> ▪ Percentage of team represented by each professional ▪ Percentage of team represented by each personal skill and knowledge
	Convince people to join the team by pointing out the benefit of joining the team by using evidence and negotiating with a "win-win situation" strategy	<ul style="list-style-type: none"> ▪ Number of old team members ▪ Number of new team members ▪ Team members' satisfaction level with working as team
Team process	Create a congenial environment via informal communication	<ul style="list-style-type: none"> ▪ Number of old team members ▪ Number of new team members ▪ Team members' satisfaction level with working as team ▪ Number of old partners ▪ Number of new partners ▪ Partners' satisfaction level with the team
	Be interdependent on mutual benefits or help each other to do the job by taking and giving an advantage of tasks	
	Manage team members' competence by understanding and employing their competence to put the right man in the right job	<ul style="list-style-type: none"> ▪ Number of old team members ▪ Number of new team members ▪ Team members' satisfaction level for working as team
	Empower team members and partners by showing respect for their initiatives and listening to their voices	<ul style="list-style-type: none"> ▪ Number of old team members ▪ Number of new team members ▪ Team members' satisfaction level with working as team ▪ Number of old partners ▪ Number of new partners ▪ Partners' satisfaction level with the team
	Create team members' and partners' participation by setting up the opportunity for them to present how to accomplish team tasks and activities	<ul style="list-style-type: none"> ▪ Number of team members involved in each activity/task/planning process ▪ Number of partners involved in activities/ planning processes
	Create a learning environment for sharing knowledge by setting up learning fora regularly	<ul style="list-style-type: none"> ▪ Number of learning fora per team ▪ Number of innovations ▪ Number of best practice models

Table 4.9 (continued) Formulated indicators for reflecting team performance from the techniques of how Thai health-promoting teams perform

Themes	Techniques of how Thai health-promoting teams perform	Formulated indicators for reflecting team performance
Team support systems	Give support to individual, team and partners by providing positive feedback	<ul style="list-style-type: none"> ▪ Number of rewards at team level from internal and external organizations ▪ Number of partners' rewards from internal and external organizations ▪ Number of team members' rewards from internal and external organizations
	Develop personal skills by setting up training courses	<ul style="list-style-type: none"> ▪ Number of training courses for leaders, team members and partners (IT, KM, strategic planning skill, evaluation skill, academic or research skill) ▪ Number of training hours per leader, team member and partner ▪ Numbers of academic papers generated by leaders and team members

The results of how Thai health-promoting teams learn

When teams are fully functional, they produce extraordinary results and require learning and growth (Senge, 1998, p. 4). In team processes, the core management team and team leaders in every provincial team set up learning fora for sharing knowledge regularly, at least once a year. The results showed that teams in this study learned and grew by themselves through their actions, which were based on learning in action (Garvin, 2000). As the contexts of each team were different, Thai health-promoting teams learned from different actions as follows.

The learning process was started by the leaders who induced the climate for learning at both organizational and team levels. Team leaders acted as facilitators and coordinators to enhance their teams. The most important roles of leaders were creating opportunities and setting the tone. They created learning activity in the form of regular "learning fora" for sharing personal experiences, and used "open communication and challenge" to set the climate for encouraging learning, both

within and between teams. They also attempted to lead the discussion by questioning, listening and responding.

Meanwhile, the core team managers established the coaching teams to support learning. The coaching teams steered and guided the provincial teams in the right direction. They unveiled the best practice cases via storytelling and written reports. In addition, they created a specific internet group mail account for communicating and distributing these best practice cases through the internet as knowledge assets. The e-mail address of this specific group mail account is: maikinwan@yahoogroups.com. They also created a website for sharing and exchanging information and knowledge with other health promoting organizations via www.maikinwan.com.

When each leader created a learning environment, the team took the first step by learning within the team from past experience. Experiential learning, especially “After Action Review,” was the most popular type of learning that the leaders used for extracting lessons from past activities within the team. This technique was a self-learning strategy using well-designed challenge questions to explore and reveal past knowledge. The Nongbualamphu, Nongkhai, Phrae, Lampang and Saraburi teams used this method regularly, at least once per year. However, only the Lampang and Phrae teams produced documents, such as a “5 PIE Model” and recommendations, respectively, as described below. As well, every team learned from the learning fora that the core management team set for every province twice per year. This “After Action Review” technique used questions for reflecting team knowledge. For example, the Lampang team uncovered their experience to deal with partners through the questions: who were the partners, why teams selected to work with their partners and how teams approached partners. Each learning forum designed the questions

differently, depending on their past experience and the required knowledge which was appropriate for their teams.

Most of the results of this “After Action Review” technique revealed the strategy or “how-to” knowledge for reducing excessive snack consumption in child-care centers, kindergartens, schools and communities. These strategies emerged from different conditions (Table 4.10). Different knowledge acquisitions and conditions reflected different results and details.

For example, to deal with the local governments that were responsible for taking care of the child-care centers and kindergartens, the Lampang team created a “5 PIE Model.” This model consisted of:

- Problem: analyzing data from situation analysis and presenting these data as problems to probe the situations
- Person: identifying a key person in the team as a coordinator to deal with local government, as well as identifying local governors who can mobilize people
- Personality: selecting an acceptable coordinator
- Period: encouraging local government with the right timing
- Participation: setting mutual responsibility and benefits
- Indicator: creating “win-win” indicators together
- Evaluation: evaluating for development together

Moreover, the Phrae team generated recommendations for advocating healthy eating habits in primary schools at the provincial level. These recommendations included:

- Start by building team from multidisciplinary professions
- Integrate health issue into school curriculum
- Empower students to participate in activities
- Respect local wisdom and use them as local resources
- Create win-win situation
- Specify and clarify healthy public policy
- Advocate activities regularly through public relations
- Drive schools' motivation by using appropriate rewards
- Set up learning fora to share and capture tacit knowledge that evolved from the activities
- Maintain the equality of “sister” schools

Table 4.10 Knowledge from After Action Review

Knowledge	Conditions	Results	Details
How to deal with the local government (Lampang team)	<ul style="list-style-type: none"> ▪ The local governments are responsible for taking care of the child-care centers and kindergartens ▪ The over-consumption of snacks by children is the most important problem in the child-care centers and kindergartens 	5 PIE Model	<ul style="list-style-type: none"> ▪ Problem: analyzing data from situation analysis and presenting these data as problems to probe the situations ▪ Person: identifying a key person in the team as a coordinator to deal with local government, as well as identifying local governors who can mobilize people ▪ Personality: selecting an acceptable coordinator ▪ Period: encouraging local government with the right timing ▪ Participation: setting mutual responsibility and benefits ▪ Indicator: creating “win-win” indicators together ▪ Evaluation: evaluating for development together
How to advocate healthy eating habits in primary schools at provincial level (Phrae team)	<ul style="list-style-type: none"> ▪ The primary schools are the main target group of the Provincial Public Health Office ▪ The health problems in primary schools are students’ improper weight and dental caries 	Recommendations	<ul style="list-style-type: none"> ▪ Start by building team from multidisciplinary professions ▪ Integrate health issue into school curriculum ▪ Empower students to participate in activities ▪ Respect local wisdom and use them as local resources ▪ Create win-win situation ▪ Specify and clarify healthy public policy ▪ Advocate activities regularly through public relations ▪ Drive schools’ motivation by using appropriate rewards ▪ Set up learning fora to share and capture tacit knowledge that evolved from the activities ▪ Maintain the equality of “sister” schools

Meanwhile, intelligence gathering through search, inquiry and observation was used for learning and transferring knowledge between teams. Each team defined their needs or acquired knowledge and selected the appropriate techniques at different periods. For instance, the core management team reviewed knowledge about healthy public policies from other organizational reports and relevant documents in the network's first year. Meanwhile, the Nongbualamphu team leader received expert advice before creating health promoting teams at the provincial level. In addition, the Nongbualamphu and Nongkhai teams explored and observed each other and shared their experiences every year. The Saraburi team also observed other provincial teams to improve their team during the second year of implementation.

According to these results, the techniques of how Thai health-promoting teams learn covered three themes and eleven techniques (Table 4.11).

Table 4.11 Themes, purposes and the techniques of how Thai health-promoting teams learn

Themes	Purposes	Techniques of how Thai health-promoting teams learn
Leaders' tasks	To create a learning environment at provincial level for sharing knowledge	By setting up learning fora regularly <ul style="list-style-type: none"> ▪ for team members ▪ for partners
	To lead participation	By posing questions and listening to both team members and partners' voices
	To give support to individuals, team and partners	By providing positive feedback
	To develop personal skills	By setting up training courses
	To communicate and distribute best practice cases	By using a specific internet group mail account
Learning from present experience	To help team learning	By searching relevant documents
		By inquiring and asking experts outside the teams
		By observing other teams within province
		By observing other teams from other provinces
Learning from past experience	To help team learning	By using "After Action Review" technique in team
		Using other techniques in team, for example, outcome mapping, on-the-job training and appreciative inquiry

The results in this step showed how-to knowledge or technical knowledge of how Thai health-promoting teams learn via learning in action, which revealed three themes and 11 techniques. Nevertheless, these techniques were used differently according to the contexts of teams. Table 4.12 presents themes, purposes and the crucial techniques which were used by each team.

Table 4.12 Techniques of how Thai health-promoting teams learn that were used by each team

Themes	Purposes	Techniques of how Thai health-promoting teams learn	Thai health-promoting teams					
			NB	NK	PR	LP	SB	RB
Leaders' tasks	To create a learning environment at provincial level for sharing knowledge	By setting up learning fora regularly <ul style="list-style-type: none"> ▪ for team members 	/	/	/	/	/	/
		<ul style="list-style-type: none"> ▪ for partners 			/	/	/	
	To lead participation	By posing questions and listening to both team members and partners' voices	/	/	/	/	/	/
	To give support to individuals, team and partners	By providing positive feedback	/	/	/	/	/	/
	To develop personal skills	By setting up training courses	/	/	/	/	/	/
	To communicate and distribute best practice cases	By using a specific internet group mail account	/	/	/	/	/	/
Learning from present experience	To help team learning	By searching relevant documents	/	/	/	/	/	/
		By inquiring and asking experts outside the teams	/	/	/	/	/	
		By observing other teams within province	/	/	/	/	/	
		By observing other teams from other provinces	/	/				
Learning from past experience	To help team learning	By using "After Action Review" technique in team	/	/	/	/	/	/
		Using other techniques in team, for example, outcome mapping, on-the-job training and appreciative inquiry	/	/	/	/		

Notes: NB = Nongbualamphu, NK = Nongkhai, PR = Phrae, LP = Lampang, SB = Saraburi, RB = Ratchaburi

The analysis of how Thai health-promoting teams learn

The results from this step illustrated that how Thai health-promoting teams learn was identified as team knowledge. Following learning in action (Garvin, 2000), “how-to” knowledge, or the technical knowledge, was categorized into three themes which covered 11 techniques, as shown in Table 4.11. These techniques illustrated that each team learned from their different actions. The results reflected that each team required different knowledge, which depended on its conditions or contexts.

Leaders’ tasks and types of learning from present and past experiences were analyzed as follows.

The leaders started the learning process by using the needs assessment process.

As the team learning process created the results that team members actually desired (Senge, 1998: p. 236), the first question described what knowledge they would like to know. Then, where, how and from whom they could capture the knowledge, were subsequent questions. Team leaders steered teams to learn, and followed the stages of the learning process, acquiring, interpreting and using or applying information, in different ways (Garvin, 2000: p. 20-28).

The leaders’ tasks included initiating the appropriate situation or environment for reinforcing learning. The leaders created opportunities by using regular learning fora. They also set the tone and led the participation to lead the learning for their teams in a real environment. The leaders indicated the essential knowledge and created the proper environment for their teams. They also framed the challenge to motivate team members to learn and generated the environment to foster communication and innovation simultaneously. Nonaka, Toyama & Konno (2000) proposed four specific contexts, or environments, for sharing team members’

knowledge and learning. The specific environment is defined as a shared context in which knowledge is shared, created and utilized. In accordance with the results, two specific environments occurred. The first one was the collective and face-to-face interactions through the learning foa by using “After Action Review” technique. The people’s tacit knowledge was shared, converted into common terms and articulated concepts, through a participative environment. The articulated knowledge was brought back to each individual and articulation developed via self-reflection. The second specific environment was the collective and virtual interactions through a specific internet group mail account. This environment helped people to transmit their explicit knowledge to a large number of people in written form. This environment was also based on the concept of participation. It illustrated that teams in this study created innovations and best practice models through two specific environments.

The results also revealed that people gained knowledge through different types of learning. Teams learned from both past and present experiences. They selected learning modes, or how to learn, from their experiences. They learned from past activities by drawing lessons from what had already been implemented as tacit knowledge. New knowledge emerged and was transformed into a new set of recommendations for sharing, as exemplified in Table 4.10. The new knowledge referred to innovations and best practice models which represented team process and knowledge management for teams. They selected, gathered and applied the knowledge for improving their performance.

As well, the results pointed out that teams intentionally planned to be a learning team. Each team performance improved significantly through learning processes during three years of implementation. In fact, the stages of learning and

techniques revealed unexpected outcomes or remarkable evidence apart from the original plan. Besides, other techniques were included as learning tools such as: outcome mapping, on-the-job training, and appreciative inquiry techniques. Both internal and external team contexts accelerated and enforced the leaders in assuming the tasks of leading team learning. For example, in the third year of implementation, the Thai Health Promotion Foundation proposed a new evaluation plan which used outcome mapping, and the Provincial Public Health Offices initiated training courses in knowledge management for the leaders. These conditions supported the teams' learning process and helped them to improve their performance.

The learning experience varied from team to team. Each team learned from their work in many ways, depending on their circumstances (Gerber, 1998). The learning of health-promoting teams in this study was done in accordance with learning in action (Garvin, 2000). Team leaders acted as designers who designed the learning process and made something work in practice (Senge, 1990: p. 341-345). They assessed their teams' intelligence (Senge, 1990: p.236) by analyzing the situations and selected an appropriate type of learning for their teams at the proper time (Garvin, 2000). The learning fora were set to share team experiences and transform their experiences into innovation as knowledge conversion (Nonaka & Takeuchi, 1995).

The "After Action Review" method helped teams to reconsider their actions as double-loop learning, as described in Chapter 2. Double-loop learning helped teams to understand the reasons and motives behind the facts and actions of their implementations (Argyris & Schön, 1978: p.8-29; Argyris, 2001, Reinhardt, 2002).

These results revealed that Thai health-promoting teams, which possessed specific characteristics, genuinely learned through their experience. Nevertheless, this study

aimed to measure performance at the team level; learning at the individual level (Kolb, 1984; Mezirow, 1997; Knowles, Holton & Swanson, 2005) was not designed to be captured as knowledge in this study.

Therefore, how Thai health-promoting teams learn impacted team performance. Three themes and 11 techniques were also defined as key success factors for team performance. The researcher created indicators to indicate team performance, as shown in Table 4.13. As how Thai health-promoting teams learn was one of the aspects of how Thai health-promoting teams perform, most of the formulated indicators for reflecting team performance were similar to those formulated from the techniques of how Thai health-promoting teams perform. For instance, one of the leaders' tasks was creating a learning environment at the provincial level for sharing knowledge by setting up learning fora regularly for team members and partners. This task also represented team process, in how Thai health-promoting teams perform, in terms of creating a learning environment for sharing knowledge by setting up learning fora regularly. In consequence, the formulated indicators for reflecting team performance were the same, such as (1) number of learning fora per team, (2) number of innovations and (3) number of best practice models. Some indicators were added and were different from the formulated indicators from the techniques of how Thai health-promoting teams perform, which are presented in Table 4.9. These indicators included (1) percentage of team members using knowledge sharing through an information technology (IT) system and (2) team members' satisfaction level with the IT system which facilitates leaders' tasks to communicate and distribute best practice cases through the internet by using a specific internet group mail account.

Table 4.13 Formulated indicators for reflecting team performance from the techniques of how Thai health-promoting teams learn

Themes	Techniques of how Thai health-promoting teams learn	Formulated indicators for reflecting team performance
Leaders' tasks	Create a learning environment at provincial level for sharing knowledge by setting up learning fora regularly <ul style="list-style-type: none"> ▪ for team members ▪ for partners 	<ul style="list-style-type: none"> ▪ Number of learning fora per team ▪ Number of innovations ▪ Number of best practice models
	Lead participation by posing questions and listening to both team members and partners' voices	<ul style="list-style-type: none"> ▪ Number of old team members ▪ Number of new team members ▪ Team members' satisfaction level with working as team ▪ Number of old partners ▪ Number of new partners ▪ Partners' satisfaction level with the team
	Give support to individuals, team and partners by providing positive feedback	<ul style="list-style-type: none"> ▪ Number of rewards at team level from internal and external organizations ▪ Number of partners' rewards from internal and external organizations ▪ Number of team members' rewards from internal and external organizations
	Develop personal skills by setting up training courses	<ul style="list-style-type: none"> ▪ Number of training courses for team members and partners (IT, KM, strategic planning skill, evaluation skill, academic or research skill) ▪ Number of training hours per team member and partner ▪ Numbers of academic papers generated by team members
	Communicate and distribute best practice cases by using a specific internet group mail account	<ul style="list-style-type: none"> ▪ Percentage of team members using knowledge sharing through IT system ▪ Team members' satisfaction level with the IT system
Learning from present experience	Search relevant documents to help team learning	<ul style="list-style-type: none"> ▪ Number of learning fora per team ▪ Number of innovations ▪ Number of best practice models
	Inquire and ask experts outside the teams to help team learning	
	Observe other teams within province	
Learning from past experience	Observe other teams from other provinces	
	Use "After Action Review" technique in team	
	Use other techniques in team, for example, outcome mapping, on-the-job training and appreciative inquiry	

The results in this step demonstrated how Thai health-promoting teams perform and how Thai health-promoting teams learn. Five categories and 12 techniques were revealed from how Thai health-promoting teams perform. Meanwhile, how the teams learned uncovered three themes and 11 techniques. In accordance with both results, the researcher analyzed and used these techniques to formulate the reflected indicators. These indicators for reflecting team performance were formulated from “how-to” knowledge, or technical knowledge of teams. These formulated indicators also illustrated that some indicators reflected more than one technique and some techniques were reflected by more than one indicator.

In summary, the reflected indicators were formulated from three resources: (1) teams’ missions and outcomes, (2) the techniques of how Thai health-promoting teams perform and (3) the techniques of how Thai health-promoting teams learn. However, some indicators from different resources overlapped, (Table 4.14) whereas some indicators were distinctly different (Table 4.15).

Table 4.14 Overlapping indicators from different resources

Details	Resources		
	Teams' missions and outcomes	Techniques of how Thai health-promoting teams perform	Techniques of how Thai health-promoting teams learn
Overlapping indicators among three resources	<ul style="list-style-type: none"> ▪ Number of old partners ▪ Number of new partners ▪ Partners' satisfaction level with the team 	<ul style="list-style-type: none"> ▪ Number of old partners ▪ Number of new partners ▪ Partners' satisfaction level with the team 	<ul style="list-style-type: none"> ▪ Number of old partners ▪ Number of new partners ▪ Partners' satisfaction level with the team
Overlapping indicators between two resources	<ul style="list-style-type: none"> ▪ Number of partners involved in activities/ planning processes 	<ul style="list-style-type: none"> ▪ Number of partners involved in activities/ planning processes 	
		<ul style="list-style-type: none"> ▪ Number of learning fora per team ▪ Number of innovations ▪ Number of best practice models ▪ Number of old team members ▪ Number of new team members ▪ Team members' satisfaction level with working as team ▪ Number of rewards at team level from internal and external organizations ▪ Number of partners' rewards from internal and external organizations ▪ Number of team members' rewards from internal and external organizations ▪ Number of training courses for team members and partners (IT, KM, strategic planning skill, evaluation skill, academic or research skill) ▪ Number of training hours per team member and partner ▪ Numbers of academic papers generated by team members 	<ul style="list-style-type: none"> ▪ Number of learning fora per team ▪ Number of innovations ▪ Number of best practice models ▪ Number of old team members ▪ Number of new team members ▪ Team members' satisfaction level with working as team ▪ Number of rewards at team level from internal and external organizations ▪ Number of partners' rewards from internal and external organizations ▪ Number of team members' rewards from internal and external organizations ▪ Number of training courses for team members and partners (IT, KM, strategic planning skill, evaluation skill, academic or research skill) ▪ Number of training hours per team member and partner ▪ Numbers of academic papers generated by team members

Table 4.15 Distinct indicators in different resources

Details	Resources		
	Teams' missions and outcomes	Techniques of how Thai health-promoting teams perform	Techniques of how Thai health-promoting teams learn
Distinct indicators in different resources	<ul style="list-style-type: none"> ▪ Percentage of budget contributed by partners ▪ Number of sustainable healthy public policies/regulations ▪ Number of new healthy public policies/regulations ▪ Target group behavior identified by survey (Note: the survey included dietary and food consumption) ▪ Percentage of target group (children) who consume 6 teaspoons or less of sugar per day 	<ul style="list-style-type: none"> ▪ Percentage of team members that completely understands vision, missions and tasks ▪ Percentage of activities/planning process generated by team ▪ Number of monitoring and evaluation instances per year ▪ Number of activities/plans adjustments resulting from monitoring and evaluation ▪ Percentage of team represented by each professional ▪ Percentage of team represented by each personal skill and knowledge ▪ Number of team members involved in each activity/task/planning process ▪ Number of training courses for leaders (IT, KM, strategic planning skill, evaluation skill, academic or research skill) ▪ Number of training hours per leader ▪ Numbers of academic papers generated by leaders 	<ul style="list-style-type: none"> ▪ Percentage of team members using knowledge sharing through IT system ▪ Team members' satisfaction level with the IT system

The next step was to generate the first team performance indicators for Thai health-promoting teams by following the conceptual framework in Chapter 2 (Figure 2.7).

Step 3: Generation of team performance indicators for Thai health-promoting teams

The first set of team performance indicators

The most significant inputs for generating the first set of team performance indicators included reflected indicators formulated from three resources: (1) teams' missions and outcomes (Table 4.5), (2) the techniques of how Thai health-promoting teams perform (Table 4.9) and (3) the techniques of how Thai health-promoting teams learn (Table 4.13). Following the conceptual framework, five perspectives from the Balanced Scorecard for Thai health-promoting teams were used as a template for generating indicators. These perspectives were proposed in terms of (1) team effectiveness as process outcomes, (2) partners, (3) team efficiency as internal team processes, (4) team learning and growth and (5) team members. Thus, each formulated indicator for reflecting team performance from the three resources were classified into these five perspectives (Table 4.16, Table 4.17 and Table 4.18). The researcher defined each indicator to simplify understanding. Each code represented each indicator and the meaning of each code is described as follows:

“P” represents the perspective

“The first number” represents the perspective;

1 = Team effectiveness perspective

2 = Partner perspective

3 = Team efficiency perspective

4 = Team learning and growth perspective

5 = Team member perspective

“The second number” represents the listed order of the indicator in that perspective

For example, “P11: Percentage of budget contributed by partners” refers to the first listed indicator in the team effectiveness perspective; “P22: Number of new partners” refers to the second listed indicator in the partner perspective.

Table 4.16 Formulated indicators for reflecting team performance in teams’ missions and outcomes, which were classified into five perspectives

Themes	Details	Formulated indicators for reflecting team performance	Perspectives
Team missions	Create demands and participation of alliances and partners	P21: Number of old partners	Partners perspective
		P22: Number of new partners	Partners perspective
		P23: Number of partners involved in activities/ planning processes	Partners perspective
		P24: Partners’ satisfaction level with the team	Partners perspective
		P11: Percentage of budget contributed by partners	Team effectiveness perspective
	Set up healthy public policy or regulation	P12: Number of sustainable healthy public policies/ regulations	Team effectiveness perspective
P13: Number of new healthy public policies/ regulations		Team effectiveness perspective	
Team outcomes	Emphasize change in people’s behavior and health, focused on reducing sugar consumption	P14: Target group behavior identified by survey (Note: the survey included dietary and food consumption)	Team effectiveness perspective
		P15: Percentage of target group (children) who consume 6 teaspoons or less of sugar per day	Team effectiveness perspective

Table 4.17 Formulated indicators for reflecting team performance from the techniques of how Thai health-promoting teams perform, which were classified into five perspectives

Themes	Techniques of how Thai health-promoting teams perform	Formulated indicators for reflecting team performance	Perspectives
Team tasks	Clarify teams' tasks, vision, missions and strategies before the launch and during the implementation of the program by setting up meetings regularly	P31: Percentage of team members that completely understands vision, missions and tasks	Team efficiency perspective
Team work design	Manage their teams autonomously as self-directed teams by taking responsibility for the whole process from planning to evaluation	P32: Percentage of activities/planning process generated by team	Team efficiency perspective
		P33: Number of monitoring and evaluation instances per year	Team efficiency perspective
		P34: Number of activities/plans adjustments resulting from monitoring and evaluation	Team efficiency perspective
Team composition	Create teams by recruiting multidisciplinary people, who represented a variety of professions, skills and knowledge	P35: Percentage of team represented by each professional	Team efficiency perspective
		P36: Percentage of team represented by each personal skill and knowledge	Team efficiency perspective
	Convince people to join the team by pointing out the benefit of joining the team by using evidence and negotiating with a "win-win situation" strategy	P51: Number of old team members	Team members perspective
		P52: Number of new team members	Team members perspective
		P53: Team members' satisfaction level with working as team	Team members perspective

Table 4.17 (continued) Formulated indicators for reflecting team performance from the techniques of how Thai health-promoting teams perform, which were classified into five perspectives

Themes	Techniques of how Thai health-promoting teams perform	Formulated indicators for reflecting team performance	Perspectives
Team process	<ul style="list-style-type: none"> ▪ Create a congenial environment via informal communication ▪ Be interdependent on mutual benefits or help each other to do the job by taking and giving an advantage of tasks ▪ Empower team members and partners by showing respect for their initiatives and listening to their voices 	P51: Number of old team members	Team members perspective
		P52: Number of new team members	Team members perspective
		P53: Team members' satisfaction level with working as team	Team members perspective
		P21: Number of old partners	Partners perspective
		P22: Number of new partners	Partners perspective
		P24: Partners' satisfaction level with the team	Partners perspective
	Manage team members' competence by understanding and employing their competence to put the right man in the right job	P51: Number of old team members	Team members perspective
		P52: Number of new team members	Team members perspective
		P53: Team members' satisfaction level with working as team	Team members perspective
	Create team members' and partners' participation by setting up the opportunity for them to present how to accomplish team tasks and activities	P54: Number of team members involved in each activity/task/planning process	Team members perspective
		P23: Number of partners involved in activities/planning processes	Partners perspective
	Create a learning environment for sharing knowledge by setting up learning fora regularly	P41: Number of learning fora per team	Team learning and growth perspective
		P42: Number of innovations	Team learning and growth perspective
		P43: Number of best practice models	Team learning and growth perspective

Table 4.17 (continued) Formulated indicators for reflecting team performance from the techniques of how Thai health-promoting teams perform, which were classified into five perspectives

Themes	Techniques of how Thai health-promoting teams perform	Formulated indicators for reflecting team performance	Perspectives
Team support systems	Give support to individuals, team and partners by providing positive feedback	P16: Number of rewards at team level from internal and external organizations	Team effectiveness perspective
		P25: Number of partners' rewards from internal and external organizations	Partners perspective
		P55: Number of team members' rewards from internal and external organizations	Team members perspective
	Develop personal skills by setting up training courses	P44: Number of training courses for leaders	Team learning and growth perspective
		P56: Number of training courses for team members	Team members perspective
		P26: Number of training courses for partners	Partners perspective
		P45: Number of training hours per leader	Team learning and growth perspective
		P57: Number of training hours per team member	Team members perspective
		P27: Number of training hours per partner	Partners perspective
		P46: Numbers of academic papers generated by leaders	Team learning and growth perspective
P58: Numbers of academic papers generated by team members	Team members perspective		

Table 4.18 Formulated indicators for reflecting team performance from the techniques of how Thai health-promoting teams learn, which were classified into five perspectives

Themes	Techniques of how Thai health-promoting teams learn	Formulated indicators for reflecting team performance	Perspectives
Leaders' tasks	Create learning environment at provincial level for sharing knowledge by setting up learning fora regularly <ul style="list-style-type: none"> ▪ for team members ▪ for partners 	P41: Number of learning fora per team	Team learning and growth perspective
		P42: Number of innovations	Team learning and growth perspective
		P43: Number of best practice models	Team learning and growth perspective
	Lead participation by posing questions and listening to both team members and partners' voices	P51: Number of old team members	Team members perspective
		P52: Number of new team members	Team members perspective
		P53: Team members' satisfaction level with working as team	Team members perspective
		P21: Number of old partners	Partners perspective
		P22: Number of new partners	Partners perspective
		P24: Partners' satisfaction level with the team	Partners perspective
	Give support to individuals, team and partners by providing positive feedback	P16: Number of rewards at team level from internal and external organizations	Team effectiveness perspective
		P25: Number of partners' rewards from internal and external organizations	Partners perspective
		P55: Number of team members' rewards from internal and external organizations	Team members perspective
	Develop personal skills by setting up training courses	P56: Number of training courses for team members	Team members perspective
		P26: Number of training courses for partners	Partners perspective
		P57: Number of training hours per team member	Team members perspective
P27: Number of training hours per partner		Partners perspective	
P58: Numbers of academic papers generated by team members		Team members perspective	

Table 4.18 (continued) Formulated indicators for reflecting team performance from the techniques of how Thai health-promoting teams learn, which were classified into five perspectives

Themes	Techniques of how Thai health-promoting teams learn	Formulated indicators for reflecting team performance	Perspectives
Leaders' tasks	Communicate and distribute best practice cases by using a specific internet group mail account	P47: Percentage of team members using knowledge sharing through IT system	Team learning and growth perspective
		P48: Team members' satisfaction level with the IT system	Team learning and growth perspective
Learning from present experience	<ul style="list-style-type: none"> ▪ Search relevant documents to help team learning ▪ Inquire and ask experts outside the teams to help team learning ▪ Observe other teams within province ▪ Observe other teams from other provinces 	P41: Number of learning fora per team	Team learning and growth perspective
		P42: Number of innovations	Team learning and growth perspective
		P43: Number of best practice models	Team learning and growth perspective
Learning from past experience	<ul style="list-style-type: none"> ▪ Use "After Action Review" technique in team ▪ Use other techniques in team, for example, outcome mapping, on-the-job training and appreciative inquiry 	P41: Number of learning fora per team	Team learning and growth perspective
		P42: Number of innovations	Team learning and growth perspective
		P43: Number of best practice models	Team learning and growth perspective

Each indicator was categorized into perspectives as shown in Tables 4.16, 4.17 and 4.18. Because how Thai health-promoting teams learn was a component of how Thai health-promoting teams perform, in terms of team process, most of the techniques overlapped. Most of the indicators of how Thai health-promoting teams learn were similar to the indicators of how Thai health-promoting teams perform, except for two indicators: (1) P47: Percentage of team members using knowledge

sharing through the IT system and (2) P48: Team members' satisfaction level with the IT system, as shown in Tables 4.14 and 4.15.

Besides, the Balanced Scorecard categorized indicators into two types: lagging and leading indicators. The outcome measures, or lagging indicators, relate to the past performance of the organization's strategy, but provide little guidance for the future, whereas performance driver measures, or leading indicators, communicate how the outcomes are to be achieved and describe how a business process is intended to change (Kaplan & Norton, 1993; 1996a). Following the conceptual framework for generating team performance indicators, all of the formulated indicators for reflecting team performance in each perspective were divided into both types of indicators.

Therefore, the first set of team performance indicators consisted of 18 lagging indicators and 17 leading indicators. The numbers of indicators in each perspective were different, as presented in Table 4.19.

Table 4.19 The first set of team performance indicators

Perspectives	Outcome measurement (lagging indicators) (18)	Performance driver measurement (leading indicators) (17)
Team effectiveness perspective (6 indicators)	<p>P11: Percentage of budget contributed by partners</p> <p>P12: Number of sustainable healthy public policies/regulations</p> <p>P14: Target group behavior identified by survey (Note: the survey included dietary and food consumption)</p> <p>P15: Percentage of target group (children) who consume 6 teaspoons or less of sugar per day</p> <p>P16: Number of rewards at team level from internal and external organizations</p>	P13: Number of new healthy public policies/regulations
Partners perspective (7 indicators)	<p>P21: Number of old partners</p> <p>P24: Partners' satisfaction level with the team</p> <p>P25: Number of partners' rewards from internal and external organizations</p>	<p>P22: Number of new partners</p> <p>P23: Number of partners involved in activities / planning processes</p> <p>P26: Number of training courses for partners</p> <p>P27: Number of training hours per partner</p>
Team efficiency perspective (6 indicators)	P31: Percentage of team members that completely understands vision, missions and tasks	<p>P32: Percentage of activities/planning process generated by team</p> <p>P33: Number of monitoring and evaluation instances per year</p> <p>P34: Number of activities/plans adjustments resulting from monitoring and evaluation</p> <p>P35: Percentage of team represented by each professional</p> <p>P36: Percentage of team represented by each personal skill and knowledge</p>
Team learning and growth perspective (8 indicators)	<p>P42: Number of innovations</p> <p>P43: Number of best practice models</p> <p>P46: Number of academic papers generated by leaders</p> <p>P47: Percentage of team members using knowledge sharing through IT system</p> <p>P48: Team members' satisfaction level with the IT system</p>	<p>P41: Number of learning fora per team</p> <p>P44: Number of training courses for leaders</p> <p>P45: Number of training hours per leader</p>
Team members perspective (8 indicators)	<p>P51: Number of old team members</p> <p>P53: Team members' satisfaction level with working as team</p> <p>P55: Number of team members' rewards from internal and external organizations</p> <p>P58: Number of academic papers generated by team members</p>	<p>P52: Number of new team members</p> <p>P54: Number of team members involved in each activity / task / planning process</p> <p>P56: Number of training courses for team members</p> <p>P57: Number of training hours per member</p>

The analysis of the first set of team performance indicators

From Table 4.19, the first set of team performance indicators, which was determined by (1) teams' missions and outcomes, (2) team knowledge from the techniques of how Thai health-promoting teams perform and (3) team knowledge from the techniques of how Thai health-promoting teams learn, consisted of 35 indicators. These indicators reflected both lagging and leading indicators. The lagging indicators, or outcome measures, refer to the performance measures that present the consequences of actions previously taken. These indicators frequently focus on results at the end of a time period and characterize historical performance. The leading indicators, or performance driver measures, represent intermediate processes and activities. It is suggested that improved performance in a leading indicator would drive better performance in the lagging indicator (Niven, 2003: p. 295). Following these definitions, the first set of 35 team performance indicators were categorized into lagging and leading indicators (Table 4.19). The indicators consisted of 18 lagging indicators and 17 leading indicators. The numbers of indicators were different in each perspective.

In each set of indicators, some attributes emerged as themes. The researcher grouped the same characteristics of the indicators into sub-perspectives and labeled them with new terms for each sub-perspective, as shown in Table 4.20. The details of sub-perspectives included:

- The team effectiveness perspective consisted of four sub-perspectives:
 - Financial opportunity
 - Healthy public policy
 - Target group behavior change

- Team recognition
- The partners perspective involved four sub-perspectives:
 - Partner relationship
 - Partner participation
 - Partner's skills improvement
 - Partner recognition
- The team efficiency perspective included two sub-perspectives:
 - Strengthening team building
 - Monitoring and evaluation system
- The team learning and growth perspective comprised three sub-perspectives:
 - Knowledge management for team
 - Team leaders' skill improvement
 - IT system for team
- The team members perspective covered four sub-perspectives:
 - Team members' relationship
 - Team members' participation
 - Team members' skills improvement
 - Team members' recognition

Table 4.20 The first set of team performance indicators and sub-perspectives

Perspectives	Sub-perspectives	Outcome measurement (lagging indicators)	Performance driver measurement (leading indicators)
Team effectiveness perspective	Financial opportunity	P11: Percentage of budget contributed by partners	
	Healthy public policy	P12: Number of sustainable healthy public policies/regulations	P13: Number of new healthy public policies/ regulations
	Target group behavior change	P14: Target group behavior identified by survey (Note: the survey included dietary and food consumption) P15: Percentage of target group (children) who consume 6 teaspoons or less of sugar per day	
	Team recognition	P16: Number of rewards at team level from internal and external organizations	
Partners perspective	Partner relationship	P21: Number of old partners P24: Partners' satisfaction level with the team	P22: Number of new partners
	Partner participation		P23: Number of partners involved in activities / planning processes
	Partner's skills improvement		P26: Number of training courses for partners (IT, KM, strategic planning skill) P27: Number of training hours per partner
	Partner recognition	P25: Number of partners' rewards from internal and external organizations	

Table 4.20 (continued) The first set of team performance indicators and sub-perspectives

Perspectives	Sub-perspectives	Outcome measurement (lagging indicators)	Performance driver measurement (leading indicators)
Team efficiency perspective	Strengthening team building	P31: Percentage of team members that completely understands vision, missions and tasks	P32: Percentage of activities/planning process generated by team P35: Percentage of team represented by each professional P36: Percentage of team represented by each personal skill and knowledge
	Monitoring and evaluation system		P33: Number of monitoring and evaluation instances per year P34: Number of activities/plans adjustments resulting from monitoring and evaluation
Team learning and growth perspective	Knowledge management for team	P42: Number of innovations P43: Number of best practice models	P41: Number of learning fora per team
	Team leaders' skill improvement	P46: Number of academic papers generated by leaders	P44: Number of training courses for leaders P45: Number of training hours per leader
	IT system for team	P47: Percent of team members using knowledge sharing through IT system P48: Team members' satisfaction level with the IT system	

Table 4.20 (continued) The first set of team performance indicators and sub-perspectives

Perspectives	Sub-perspectives	Outcome measurement (lagging indicators)	Performance driver measurement (leading indicators)
Team members perspective	Team members' relationship	P51: Number of old team members P53: Team members' satisfaction level with working as team	P52: Number of new team members
	Team members' participation		P54: Number of team members involved in each activity / task / planning process
	Team members' skills improvement	P58: Number of academic papers generated by team members	P56: Number of training course for team members P57: Number of training hours per member
	Team members' recognition	P55: Number of team members' rewards from internal and external organizations	

The first set of team performance indicators was generated by using the formulated indicators for team performance from the previous part as inputs and following the conceptual framework for generating team performance indicators for Thai health-promoting teams. The first set of team performance indicators consisted of five perspectives, 17 sub-perspectives, 18 outcome measurements, or lagging indicators, and 17 performance driver measurements, or leading indicators. The next step was the verification and selection of critical indicators in real situations.

Step 4: Verification and selection of team performance indicators for Thai health-promoting teams

This step was to verify and select indicators by using a peer review technique through three techniques: (1) questionnaire, (2) interviews and (3) focus group discussion. The questionnaires were sent purposively to six provincial teams. These provincial health-promoting teams included those in Lampang, Phrae, Saraburi, Ratchaburi, Nongkhai and Ubon Ratchathani. The samples answering the questionnaire consisted of eight health-promoting team leaders, three team members, three team partners and three coaches, as described in Table 4.3. As well, all of the respondents had been members of the network for more than three years and were asked for their consent to respond for feedback before the questionnaire was sent to them. After receiving the completed questionnaire, the researcher interviewed eight provincial health-promoting team leaders from six provincial teams who responded the questionnaire by using five questions. After that one focus group discussion was conducted for priority setting and selecting critical indicators for teams. The participants in the focus group consisted of one health-promoting team leader and ten team members. The results are presented as follows.

The results from the questionnaire

Five perspectives were used as a template for generating indicators, which consisted of leading and lagging indicators. The feedback from the questionnaire showed that all of the samples answering the questionnaire agreed with the five perspectives. Every sample reflected that each perspective was important for teams. However, the weight of each perspective varied from one team to another, depending

on the experience and the contexts of each team. They gave the reasons for supporting their reflection as illustrated in Table 4.21.

Table 4.21 Reasons for weighting each perspective

Perspectives	Reasons
Team effectiveness perspective	<ul style="list-style-type: none"> • The outcomes can refer to the sustainability of teams, including effect on behavior change. • The final outcome was the most important perspective.
Partners' perspective	<ul style="list-style-type: none"> • Partners help teams to work; however, they should understand the teams' work. • To expand the network, partners are important. Nevertheless, it is not easy to deal with partners; team leaders have to be patient.
Team efficiency perspective	<ul style="list-style-type: none"> • A good team process is the first step for a team's success. • Strengthening team building is significant. When team members help each other to work, achievements occur.
Team learning and growth perspective	<ul style="list-style-type: none"> • Learning is an essential factor for team growth. • New knowledge and opportunity for learning can help team development and growth.
Team members perspective	<ul style="list-style-type: none"> • Team members' perspective is the fundamental perspective to drive the team. • Although team members' opinions may not represent consensus, a good relationship between team members can help team members to work together.

As well, each team specifically set baseline data and targets. Baseline data represented the results at the time of completion of the questionnaire, whereas targets referred to the desired results of a performance measure. In brief, targets were compared to baseline data and helped teams to rethink and reconsider their performance. Each team leader reconsidered the team's targets and proposed meaningful results, derived from measurement, and provided teams with feedback regarding performance. They also learned to achieve their targets. These baseline data and targets in this study were specific for Thai health-promoting teams. The results of the baseline data and targets are not shown because each team set their own baseline data and targets, which varied for each perspective.

Comments for each indicator were considered for revising the first set of team performance indicators. Reflection on the indicators revealed that eight indicators were difficult to use in real situations, especially to collect data, whereas the unit of measurement should be changed for four indicators (Table 4.22).

Table 4.22 Indicators that were commented from the questionnaire

Reasons	Indicators	Number of comments			
		TL(8)	TM(3)	P(3)	C(3)
Data collection was difficult for these indicators	P15: Percentage of target group (children) who consume 6 teaspoons or less of sugar per day	3	2		
	P24: Partners' satisfaction level with the team	2	1	1	
	P27: Number of training hours per partner	1	1		
	P36: Percentage of team represented by each personal skill and knowledge	3	1	1	
	P45: Number of training hours per leader	1	1		
	P48: Team members' satisfaction level with the IT system	1	1	1	
	P53: Team members' satisfaction level with working as team	2			
	P57: Number of training hours per member	1	1	1	
The unit of measurement should be changed for these indicators	P26: Number of training courses for partners	2	1		
	P45: Number of training courses for leaders				
	P56: Number of training courses for team members				
	The unit of measurement should be "Number of training days"				
	P35: Percentage of team represented by each professional	2	1	1	1
	The unit of measurement should be "Number of team represented by each professional"				

Notes: TL = Team leader (8), TM = Team member (3), P = Partner (3) and C = Coach (3)

The results from the interview

Most of the interviewees from eight provincial health-promoting team leaders who responded to the questionnaire agreed to measure their team performance. They also reflected that the first set of team performance indicators helped them to reconsider their team performance. Baseline data and targets made it easy for them to enhance their teams.

“I will establish learning fora and share my ideas with my team members. I will use these team performance indicators as input for our planning. I hope that these indicators can help me to improve my team performance soon.” (Team Leader

6)

“These indicators help me to think about our plan and destination. My team has never collected some baseline data and targets. I will talk with my team and reconsider our work.” (Team Leader 2)

However, they claimed that it was not easy to use all of these indicators. Data collection for some indicators required time, and increased the workload.

“I agree to measure our performance. However, there are plenty of details. I need good planning to collect the data. I think that my team members may become stressed and feel unhappy to increase their workload”. (Team Leader 5)

“We can’t control everything. Some indicators are out of our control, for example, partners’ satisfaction level with the team, even though we work hard with the partners and it seems to be that we can walk together. Collecting the data is difficult because we do not know the real satisfaction level of the partners..” (Team Leader 2)

The results from focus group discussion

One provincial health-promoting team which had been a member of the network for one year was selected for the focus group discussion. This team consisted of one team leader and ten team members. Priority setting and selecting critical indicators for team performance were the main objectives for the focus group discussion. The indicators in each perspective were prioritized and the significant indicators were selected for the team. Each person discussed and weighted each indicator. The priority setting was determined by agreement between the team leader and team members. The results showed that each indicator was weighted differently. For each indicator, the maximum score was five and the minimum score was one. Table 4.23 presents the weight for each indicator. The scores of the indicators which were questionable or impractical in real situations were less than the scores of the indicators which were practical in real situations. The focus group also suggested that some indicators should be excluded because data collection for them was difficult. These excluded indicators were similar to those described in comments from the questionnaire.

Table 4.23 Weight for each indicator from focus group discussion

Perspectives	Sub-perspectives	Outcome measurement (lagging indicators)	Performance driver measurement (leading indicators)	Weight	
Team effectiveness perspective	Financial opportunity	P11: Percentage of budget contributed by partners		4.3	
	Healthy public policy	P12: Number of sustainable healthy public policies /regulations		3.5	
			P13: Number of new healthy public policies/ regulations		3.6
	Target group behavior change	P14: Target group behavior identified by survey (Note: the survey included dietary and food consumption)			4.7
			P15: Percentage of target group (children) who consume 6 teaspoons or less of sugar per day		Should be excluded
	Team recognition	P16: Number of rewards at team level from internal and external organizations			3.0
Partners perspective	Partner relationship	P21: Number of old partners		4.8	
		P24: Partners' satisfaction level with the team		Should be excluded	
			P22: Number of new partners		4.7
	Partner participation		P23: Number of partners involved in activities / planning processes		3.4
	Partner's skills improvement		P26: Number of training courses for partners (IT, KM, strategic planning skill)		3.0
			P27: Number of training hours per partner		Should be excluded
	Partner recognition	P25: Number of partners' rewards from internal and external organizations			3.0

Table 4.23 (continued) Weight for each indicator from focus group discussion

Perspectives	Sub-perspectives	Outcome measurement (lagging indicators)	Performance driver measurement (leading indicators)	Weight	
Team efficiency perspective	Strengthening team building	P31: Percentage of team members that completely understands vision, missions and tasks		4.5	
			P32: Percentage of activities/planning process generated by team	4.4	
			P35: Percentage of team represented by each professional	3.7	
			P36: Percentage of team represented by each personal skill and knowledge	Should be excluded	
	Monitoring and evaluation system		P33: Number of monitoring and evaluation instances per year		3.8
			P34: Number of activities/plans adjustments resulting from monitoring and evaluation		3.1
Team leaning and growth perspective	Knowledge management for team	P42: Number of innovations		3.9	
		P43: Number of best practice models		4.7	
			P41: Number of learning fora per team	4.8	
	Team leaders' skill improvement	P46: Number of academic papers generated by leaders		3.2	
			P44: Number of training courses for leaders	3.4	
			P45: Number of training hours per leader	Should be excluded	
	IT system for team	P47: Percentage of team members using knowledge sharing through IT system		3.0	
			P48: Team members' satisfaction level with the IT system	Should be excluded	

Table 4.23 (continued) Weight for each indicator from focus group discussion

Perspectives	Sub-perspectives	Outcome measurement (lagging indicators)	Performance driver measurement (leading indicators)	Weight
Team members perspective	Team members' relationship	P51: Number of old team members		4.8
		P53: Team members' satisfaction level with working as team		Should be excluded
			P52: Number of new team members	3.9
	Team members' participation		P54: Number of team members involved in each activity / task / planning process	4.7
	Team members' skills improvement	P58: Number of academic papers generated by team members		3.0
			P56: Number of training courses for team members	4.7
			P57: Number of training hours per member	Should be excluded
	Team members' recognition	P55: Number of team members' rewards from internal and external organizations		3.2

The critical team performance indicators

The results from the questionnaire revealed that (1) all of the five perspectives were appropriate, (2) every perspective was important, but the significance of each perspective was unequal in each team, depending on teams' contexts and experience, (3) each team set its own targets, which varied for each perspective from one team to another and (4) some indicators were not appropriate in real situations. The results from the interviews revealed that team leaders were satisfied with the indicators and learned from them. As well, the interviews confirmed that some indicators were not appropriate in real situations. Meanwhile, the critical team performance indicators were the final results of the focus group discussion.

The first set of team performance indicators from Step 3 was prioritized and adjusted from three sources: (1) the comments from the questionnaire, (2) the reflection from the interview and (3) the priority setting from the focus group discussion. The critical indicators were selected. Eleven critical indicators consisted of six lagging and five leading indicators (Table 4.24). These critical indicators reflected team performance in real situations.

Table 4.24 Critical indicators in each perspective

Perspectives	Sub-perspectives	Critical indicators	
		Outcome measurement (lagging indicators) (6)	Performance driver measurement (leading indicators) (5)
Team effectiveness perspective	Financial opportunity	P11: Percentage of budget contributed by partners	
	Target group behavior change	P14: Target group behavior identified by survey	
Partner perspective	Partner relationship	P21: Number of old partners	P22: Number of new partners
Team efficiency perspective	Strengthening team building	P31: Percentage of team members that completely understands vision, missions and tasks	P32: Percentage of activities/ planning process generated by team
Team learning and growth perspective	Knowledge management for team	P43: Number of best practice models	P41: Number of learning fora per team
Team member perspective	Team members' relationship	P51: Number of old team members	
	Team members' participation		P54: Number of team members involved in each activity / task/ planning process
	Team members' skills improvement		P: 56 Number of training days for team members

The analysis of the verification and selection step

The reflection from the questionnaire, the interviews and focus group discussion illustrated that the first set of team performance indicators was adjusted from many reasons. The most important reason was the difficulty of data collection, which increased teams' workload in real situations. Finally, from the first set of 35 team performance indicators, which included 18 lagging and 17 leading indicators (Table 4.20), Table 4.24 shows that only six lagging and five leading indicators were crucial for teams. These critical indicators covered some sub-perspectives. In accordance with the questionnaire responses, the interviews and focus group discussion, each critical indicator was supported by reasons as follows:

- Team effectiveness perspective: Two sub-perspectives, (1) financial opportunity sub-perspective and (2) target group behavior change sub-perspective, were crucial to measure team effectiveness. In the financial opportunity sub-perspective, "P11: Percentage of budget contributed by partners" was selected as a critical indicator because this indicator reflected the partners' participation and the relationships between team and partners. This indicator reflected the missions of Thai health-promoting teams in terms of creating demands and participation of alliances and partners. Meanwhile, the target group behavior change sub-perspective was reflected by "P14: Target group behavior identified by survey," because the data were important for planning, evaluation, and social mobilization. This indicator reflected the outcomes of Thai health-promoting teams in this study, emphasizing the changes in people's behavior and health, which focused on reducing sugar consumption.

- Partner perspective: Only the partner relationship sub-perspective was prominent for evaluating the partner perspective. Two indicators were selected for different reasons. “P21: Number of old partners” referred to partners’ sustainability and relationships, whereas “P22: Number of new partners” illustrated teams’ potential to expand the networks. These indicators related to the missions of Thai health-promoting teams in terms of creating demands and participation of alliances and partners. These indicators were also associated with the team process of how to deal with the partners.
- Team efficiency perspective: Only the strengthening team building sub-perspective was significant for evaluating the team efficiency perspective. “P31: Percentage of team members that completely understands vision, missions and tasks” represented the achievements of teams that required directions for every team member to recognize the teams’ tasks. Meanwhile, “P32: Percentage of activities/planning process generated by team” clarified that the team work design of Thai health-promoting teams in this study qualified them as self-directed teams.
- Team learning and growth perspective: The knowledge management for team sub-perspective was the most important for evaluating the team learning and growth perspective. “P41: Number of learning fora per team” confirmed that leaning was important for teams. This indicator signified that creating a learning environment for sharing knowledge by setting up learning fora regularly was the most significant task for Thai health-promoting team leaders. As well, “P43: Number of best practice models”

helped teams to improve their tasks and to reconsider themselves in terms of learning and growth.

- Team member perspective: Team members' relationship, team members' participation and team members' skills improvement were influential in evaluating the team member perspective. Both "P51: Number of old team members" and "P54: Number of team members involved in each activity/task/ planning process" indicated team members' sustainability and relationships. This indicator was also considered as reflecting participation, which is important in the new health promotion concepts (World Health Organization, 1986; 2005). "P: 56 Number of training days for team members" referred to the human resource development that was significant for enhancing team members' skills.

The research process, which was comprised of four steps, was completed. Every step employed different sampling methods, samples, instruments, data collection methods and data analysis methods. First, teams' missions and outcomes were clarified. Second, team knowledge, which included how Thai health-promoting teams perform and how Thai health-promoting teams learn, was identified. Third, the researcher formulated indicators for reflecting team performance from (1) teams' missions and outcomes, (2) the techniques of how Thai health-promoting teams perform and (3) the techniques of how Thai health-promoting teams learn, as inputs. Then, the first set of team performance indicators for Thai health-promoting teams was generated. Thirty-five indicators included 18 lagging and 17 leading indicators. Fourth, in the final step, those indicators were verified and reduced to the critical team

performance indicators for Thai health-promoting teams. Eleven critical team performance indicators were comprised of six lagging and five leading indicators. Table 4.25 presents the comparison of the first set and the final critical team performance indicators.

Summary

This chapter explains the results of this study, step by step. This study modified the Balanced Scorecard used in business organizations as a knowledge management tool for developing team performance indicators in the health-promoting team context. The process, results and analysis used to develop team performance indicators were clarified to reflect team performance. Teams' missions and outcomes, the specific techniques of how teams perform and the specific techniques of how teams learn were used as inputs for generating team performance indicators. Finally, critical team performance indicators which were specific for Thai health-promoting teams were proposed as the final results.

Table 4.25 Comparison of the first set and the final critical team performance indicators

Perspective	Sub-perspectives	The first set of team performance indicators (35)		The critical team performance indicators (11)	
		Outcome measurement (lagging indicators) (18)	Performance driver measurement (leading indicators) (17)	Outcome measurement (lagging indicators) (6)	Performance driver measurement (leading indicators) (5)
Team effectiveness perspective	Financial opportunity	P11: Percentage of budget contributed by partners		P11: Percentage of budget contributed by partners	
	Healthy public policies/ regulations on food and nutrition	P12: Number of sustainable healthy public policies/ regulations	P13: Number of new healthy public policies/ regulations		
	Target group behavior change	P14: Target group behavior identified by survey (Note: the survey included dietary and food consumption)		P14: Target group behavior identified by survey (Note: the survey included dietary and food consumption)	
		P15: Percentage of target group (children) who consume 6 teaspoons or less of sugar per day			
	Team recognition	P16: Number of rewards at team level from internal and external organizations			
Partners perspective	Partner relationship	P21: Number of old partners	P22: Number of new partners	P21: Number of old partners	P22: Number of new partners
		P24: Partners' satisfaction level with the team			
	Partner participation		P23: Number of partners involved in activities / planning processes		
	Partner's skills improvement		P26: Number of training courses for partners (IT, KM, strategic planning skill)		
			P27: Number of training hours per partner		
	Partner recognition	P25: Number of partners' rewards from internal and external organizations			

Table 4.25 (continued) Comparison of the first set and the final critical team performance indicators

Perspective	Sub-perspectives	The first set of team performance indicators (35)		The critical team performance indicators (11)			
		Outcome measurement (lagging indicators) (18)	Performance driver measurement (leading indicators) (17)	Outcome measurement (lagging indicators) (6)	Performance driver measurement (leading indicators) (5)		
Team efficiency perspective	Strengthening team building	P31: Percentage of team members that completely understands vision, mission and tasks	P32: Percentage of activities/planning process generated by team	P31: Percentage of team members that completely understands vision, mission and tasks	P32: Percentage of activities/planning process generated by team		
			P35: Percentage of team represented by each professional				
			P36: Percentage of team represented by each personal skill and knowledge				
	Monitoring and evaluation system		P33: Number of monitoring and evaluation instances per year				
			P34: Number of activities/plans adjustments resulting from monitoring and evaluation				
Team learning and growth perspective	Knowledge management for team	P42: Number of innovations	P41: Number of learning fora per team		P41: Number of learning fora per team		
		P43: Number of best practice models		P43: Number of best practice models			
	Team leaders' skill improvement	P46: Number of academic papers generated by leaders	P44: Number of training courses for leaders (IT, KM, strategic planning skill, evaluation skill, academic or research skill)				
			P45: Number of training hours per leader				
	IT system for team	P47: Percentage of team members using knowledge sharing through IT system					
		P48: Team members' satisfaction level with the IT system					

Table 4.25 (continued) Comparison of the first set and the final critical team performance indicators

Perspective	Sub-perspectives	The first set of team performance indicators (35)		The critical team performance indicators (11)	
		Outcome measurement (lagging indicators) (18)	Performance driver measurement (leading indicators) (17)	Outcome measurement (lagging indicators) (6)	Performance driver measurement (leading indicators) (5)
Team members perspective	Team members' relationship	P51: Number of old team members	P52: Number of new team members	P51: Number of old team members	
		P53: Team members' satisfaction level with working as team			
	Team members' participation		P54: Number of team members involved in each activity / task / planning process		P54: Number of team members involved in each activity / task / planning process
	Team members' skills improvement	P58: Number of academic papers generated by team members	P56: Number of training courses for team members (IT, strategic planning skill, evaluation skill, academic or research skill)		P56: Number of training courses for team members (IT, strategic planning skill, evaluation skill, academic or research skill)
			P57: Number of training hours per member		
Team members' recognition	P55: Number of team members' rewards from internal and external organizations				