

CHAPTER 4

Research results

In this chapter, presentation of results includes analysis results according to 3 steps of research' objectives: 1) An analysis result with context and needs assessment to develop teaching provision competency to promote primary students' health, 2) An analysis result with quality's model of developing teaching provision competency of physical education teachers to promote health for primary students, and 3) An analysis result with efficiency of the model of developing teaching provision competency of physical education teachers to promote health for primary students. More presentation of results in details in each steps are explained as follows:

4.1 Context and needs assessment to develop teaching provision competency to promote primary students' health

In this step, the researcher divided a presentation of results into 4 sections: 1) a result of studying context about general information of schools, students, and physical education teachers, 2) a result of studying needs to develop in teaching provision competency of physical education teachers to promote health for primary students, 3) a result of studying requirements of models and methods of development, and 4) a result of a group discussion. In each 4 sections, presentations of results were elucidated as follows:

4.1.1 A result of studying context A studying of context was conducted by questionnaires. Questionnaires were distributed to physical education teachers who teach in elementary schools under primary educational area service office 1, in 8 provinces from upper northern region. The questionnaires were distributed to 321 schools; 1 school per 1 questionnaires. Replied questionnaires were received 284 questionnaires (88.47%).

A study found that 2,641 persons answered questionnaires. Most participants were female, 1810 persons (68.53%). Male participants were 831 persons (31.47%). However, most of physical education teachers was male, 236 persons (66.86%). Only 127 schools (44.70%) had enough number of physical education

teachers, while 157 schools (55.30%) did not have enough number of physical education teachers. Most schools, 197 schools (69.40%), did not have physical education teachers with the physical education degree. Yet, a significant amount number of schools at 277 schools (97.50%) had a policy for promoting physical education activities. 236 schools (83.10%) had a policy for promoting physical education teachers' development while 48 schools (16.90%) did not have it.

An analysis result about students' general information found that there were 27,707 students. Majority number of students is male, 14,103 students (50.90%). A total number of classrooms were 1,613 classrooms. There were students in a special needs education class 296 students (5.27%). There were students with weight exceed a standard 1,401 students (5.06%), students with weight lower than a standard 1,728 students (6.24%), and students with lower than physical fitness level standard 1,271 students (4.59%). Number of students who did not like exercising was 360 students (1.30%). Students with negative attitude toward exercising and playing sports were 203 students (0.73%). Students who did not pass a literacy assessment were 764 students (2.48%).

An analysis result about general information of physical education teachers in elementary school found that physical education teachers generally were male, 220 persons (77.50%). Their average age was 46 years old. Large amount number of participants had a bachelor degree, 232 persons (81.70%). Most of participants were permanent civil servant, 229 persons (80.60%). Most of them was in a professional level, 123 persons (43.30%). 136 persons (47.90%) has taught physical education for 15 years consecutively. A large number of physical education teachers at 89.10%, 253 persons, taught elementary students in various grades. In average of teaching hours in physical education subject were 6.2 hours/week. Mostly, physical education teachers had teaching responsibilities to teach many subjects, 257 persons (90.50%). Only 27 persons (9.50%) taught only physical education. Moreover, the result found that at the highest 73.20%, 208 physical education teachers had other responsibility to handle above their teaching responsibilities which was students' affairs.

4.1.2 A result of studying needs to develop in teaching provision competency of physical education teachers to promote health for primary students

From interviewing on what they needed in developing teaching provision competency of physical education teachers to promote health for primary students, there were 5 aspects as following: (1) an analysis on general condition, (2) implementing teaching and learning plan, (3) Teaching, (4) assessing and evaluating on learners and reflective thought in teaching, and (5) making an order on necessary aspects. The interview was conducted with a group example of physical education teachers 284 persons. A data analysis results are presented in table 4.1-table 4.6 as follows:

Table 4.1 Results of Assessing the Needs for Physical Education Teacher's Teaching Provision Competency Development Model for Promoting Primary Student's Health on General Condition Analysis Aspect

Lists	Existing condition		Likelihood condition		PNI _{modi}	Rank
	\bar{X}	SD.	\bar{X}	SD.		
1. General condition analysis aspect						
1.1 An analysis on promoting students' physical health event	3.24	0.69	4.25	0.80	0.31	5
1.2 An analysis on curriculum, contents about physical education to promote physical health	3.27	0.66	4.29	0.83	0.31	6
1.3 An analysis on teaching physical education to promote physical health	3.24	0.70	4.27	0.81	0.32	4
1.4 An analysis on policy of promoting and enhancing on teaching physical education for better physical health	3.17	0.72	4.24	0.84	0.34	3
1.5 An analysis on location, media, education aids in teaching physical education for better physical health	3.11	0.71	4.29	0.86	0.38	1

Table 4.1 (cont.)

Lists	Existing condition		Likelihood condition		PNI _{modi}	Rank
	\bar{X}	SD.	\bar{X}	SD.		
1.6 An analysis on local community supports and parents toward to teaching physical education for better physical health	3.12	0.72	4.26	0.92	0.37	2
Mean	3.19	0.85	4.27	0.70	0.34	

From table 4.1, when index of needs making in order (PNI_{modi}) was considered, an overall of general condition analysis aspect had the most number at 0.34. When each list of aspect was considered, the result found that the first priority an example group of physical education teachers need was a development in the aspects of analysis on location, media, education aids in teaching physical education for better physical health which had an index of needs making in order at 0.38 while an analysis on local community supports and parents toward to teaching physical education for better physical health was at 0.37 and an analysis on policy of promoting and enhancing on teaching physical education for better physical health was at 0.34, respectively.

Table 4.2 Results of Assessing the Needs for Physical Education Teacher's Teaching Provision Competency Development Model for Promoting Primary Student's Health on Implementing Teaching and Learning Plan Aspect

Lists	Existing condition		Likelihood condition		PNI _{modi}	Rank
	\bar{X}	SD.	\bar{X}	SD.		
2. Implementing teaching and learning plan						
2.1 Implementing an analysis on general context to apply in teaching and learning plan	3.28	0.87	4.30	0.71	0.31	1
2.2 Choosing appropriate content according to situation	3.55	0.86	4.35	0.73	0.22	10
2.3 Identifying learning purposes according to measurement indicator	3.59	0.89	4.39	0.72	0.22	9
2.4 Identifying learning purposes according to content	3.57	0.88	4.39	0.72	0.23	8
2.5 Implementing techniques and pedagogy according to content and learning purposes	3.54	0.87	4.40	0.71	0.24	4
2.6 Identifying teaching activities according to content and learning purposes	3.55	0.83	4.40	0.71	0.24	5
2.7 Choosing instruction media according to content and learning purposes	3.53	0.87	4.35	0.74	0.23	7
2.8 Choosing method of measurement and evaluation according to content and learning purposes	3.52	0.88	4.35	0.73	0.23	6

Table 4.2 (cont.)

Lists	Existing condition		Likelihood condition		PNI _{modi}	Rank
	\bar{X}	SD.	\bar{X}	SD.		
2.9 Choosing appropriate measurement tools according to content and learning purposes	3.40	0.82	3.40	4.26	0.25	3
2.10 Identifying a benchmark for measurement and evaluation according to content and learning purposes	3.41	0.86	4.30	0.71	0.27	2
Mean	3.49	0.87	4.35	0.73	0.24	

From table 4.2, when index of needs making in order (PNI_{modi}) was considered, an overall of implementing teaching and learning plan found that an example group of physical education teachers needed a development at 0.24 when each list of aspect was considered, the result found that the example group of physical education teachers needed a development in an analysis of general context to apply in teaching and learning plan for the first priority which had an index of needs making in order at the highest 0.31. At the same time, identifying a benchmark for measurement and evaluation according to content and learning purposes was at 0.27 and choosing appropriate measurement tools according to content and learning purposes was at 0.25, respectively.

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Table 4.3 Results of Assessing the Needs for Physical Education Teacher's Teaching Provision Competency Development Model for Promoting Primary Student's Health on Teaching aspect

Lists	Existing condition		Likelihood condition		PNI _{modi}	Rank
	\bar{X}	SD.	\bar{X}	SD.		
3. Teaching aspect						
3.1 Managing studying location and surrounding environment to support teaching and learning	3.58	0.96	4.32	0.77	0.23	5
3.2 Creating atmosphere for enhancing students' learning	3.68	0.94	4.39	0.76	0.20	11
3.3 Performing teaching physical education according to each step of teaching physical education chronologically	3.86	0.94	4.40	0.75	0.16	18
3.4 Connecting old knowledge to new knowledge	3.69	0.89	4.47	0.75	0.19	12
3.5 Students are practically able to exercise and move their body	3.93	0.94	4.40	0.79	0.14	20
3.6 Making a confidence to students while they are practicing	3.78	0.93	4.49	0.82	0.17	17
3.7 Stimulating students to be intrigued or to be eager to practice	3.78	0.92	4.44	0.77	0.18	15
3.8 Adding more fun and challenging learning atmosphere	3.71	0.91	4.45	0.80	0.19	14
3.9 Opening more opportunities for students to choose activities they are excel in and interested in	3.64	0.89	4.40	0.78	0.21	7
3.10 Opening opportunity for the students to show their capacity or achievement	3.77	0.92	4.42	0.80	0.17	16

Table 4.3 (cont.)

Lists	Existing condition		Likelihood condition		PNI _{modi}	Rank
	\bar{X}	SD.	\bar{X}	SD.		
3.11 Opening opportunity for the students to express opinion and give recommendations on their own works	3.50	0.92	4.43	0.79	0.25	3
3.12 Opening opportunity for the students to raise questions and opinion altogether	3.67	0.93	4.36	0.79	0.20	9
3.13 Facilitating the students to analyze, synthesize, solve problem, and think creatively	3.42	0.94	4.42	0.79	0.29	1
3.14 Opening opportunity for the students to conclude knowledge by themselves	3.42	0.93	4.40	0.74	0.28	2
3.15 Organizing activities concerning health promotion to encourage students to learn together inside and outside classroom	3.56	0.96	4.37	0.73	0.24	4
3.16 Organizing activities to promote the student's sportsmanship	3.86	0.92	4.41	0.76	0.16	19
3.17 Organizing activities to facilitate students to take care of themselves for health maintenance	3.69	0.96	4.47	0.74	0.21	8
3.18 Organizing activities to encourage students to apply knowledge to solve health concerned problems in their daily life.	3.69	0.91	4.46	0.74	0.20	10
3.19 Organizing activities to encourage students to search for knowledge on health from various sources	3.59	0.91	4.43	0.79	0.22	6

Table 4.3 (cont.)

Lists	Existing condition		Likelihood condition		PNI _{modi}	Rank
	\bar{X}	SD.	\bar{X}	SD.		
3.20 Organizing activities to facilitate students to learn to happily co-exist with others in the society	3.72	0.91	4.39	0.76	0.19	13
Total Mean	3.68	0.94	4.42	0.77	0.20	

From Table 4.3, when in considering general picture of priority need index (PNI_{modi}) on instructional provision, the sampled physical education teachers had the needs for development at 0.20 indicating value. When considering further into the details, it was found that the need for development on facilitating students to analyze, synthesize, solve problem, and thinking creatively came up first with priority need index of 0.29, followed by training the students to conclude knowledge by themselves (0.28) and opening opportunity for students to express opinion and recommendation on their own works (0.25).

Table 4.4 Results of Assessing the Needs for Physical Education Teacher's Teaching Provision Competency Development Model for Promoting Primary Student's Health on Learner Assessment Aspect

Lists	Existing condition		Likelihood condition		PNI _{modi}	Rank
	\bar{X}	SD.	\bar{X}	SD.		
4. Learner Assessment Aspect						
4.1 Constructing the effective instrument and checking its quality	3.17	0.81	4.19	0.76	0.32	1
4.2 Opening opportunity for the students to participate in self-evaluation	3.34	0.84	4.24	0.79	0.27	9
4.3 Proceeding the assessment along the set plan	3.46	0.86	4.30	0.79	0.24	14
4.4 Using variety of instruments or methods for assessing the students	3.36	0.82	4.26	0.77	0.27	8
4.5 Validly analyzing the assessment results	3.35	0.81	4.24	0.77	0.27	10
4.6 Using the assessment results to analyze the student's quality relevant to the issues	3.36	0.84	4.26	0.80	0.27	7
4.7 Using the results to validly check the instrument's quality.	3.21	0.87	4.23	0.77	0.31	2
4.8 Using the results to validly evaluate the students	3.44	0.83	4.28	0.76	0.25	12
4.9 Feedback the result of the assessment to each individual student	3.59	0.84	4.29	0.81	0.20	15
4.10 Presenting assessment results to keep parents continuously well informed	3.34	0.86	4.25	0.78	0.27	6

Table 4.4 (cont.)

Lists	Existing condition		Likelihood condition		PNI _{modi}	Rank
	\bar{X}	SD.	\bar{X}	SD.		
4.11 Using the assessment results to improve the instructional provision	3.47	0.84	4.32	0.76	0.25	13
4.13 Opening opportunity for students to participate in storing the assessment results	3.33	0.86	4.25	0.80	0.28	5
4.14 Recording the student's works in an easily understandable way	3.36	0.91	4.31	0.74	0.29	3
4.15 Storing the assessment results in an easily understanding way	3.37	0.88	4.19	0.76	0.28	4
Total	3.37	0.85	4.27	0.77	0.27	

From Table 4.4, the priority needs index (PNI_{modi}) in general on learner assessment is 0.27. When each item was considered, it was found that the need for development on effectively constructing and checking the quality of the instruction had the highest priority needs index (0.32) followed by the need for development on correctly using the measurement results to analyze the instrument (0.31) and recording the student's work in an easily understandable way (0.29).

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Table 4.5 Results of Assessing the Needs for Physical Education Teacher's Teaching Provision Competency Development Model for Promoting Primary Student's Health on Reflection on the Instruction Aspect

Lists	Existing condition		Likelihood condition		PNI _{modi}	Rank
	\bar{X}	SD.	\bar{X}	SD.		
5. Reflecting on the instruction aspect						
5.1 Clearly expressing ideas and feeling concerning analyzing the general condition of physical education instructional provision for the health promotion	3.32	0.85	4.30	0.72	0.283	4
5.2 Clearly expressing ideas and feeling concerning learning provision planning	3.32	0.87	4.26	0.78	0.282	5
5.3 Clearly expressing ideas and feeling concerning instructional implementation	3.32	0.85	4.26	0.76	0.286	3
5.4 Clearly expressing ideas and feeling concerning student assessment	3.33	0.85	4.27	0.77	0.292	1
5.5 Clearly analyzing and evaluating the situations occurring during the instruction	3.34	0.89	4.30	0.75	0.291	2
5.6 Reasonably concluding the ideas or identify the solution to the problems occurring during the instruction	3.40	0.82	4.32	0.74	0.261	6
5.7 Clearly comparing what exited and what expected concerning the instruction	3.42	0.85	4.29	0.76	0.249	8

Table 4.4 (cont.)

Lists	Existing condition		Likelihood condition		PNI _{modi}	Rank
	\bar{X}	SD.	\bar{X}	SD.		
5.8 Thinking, deciding, and choosing the alternatives to be used in the next instruction on reasonable basis	3.51	0.81	4.27	0.76	0.228	10
5.9 Clearly expressing ideas and feeling on the observation on the instruction carried out by colleague physical education teachers	3.42	0.89	4.31	0.78	0.260	7
5.10 Reasonably recommending the way to solve the problems occurring during the instruction of the colleague physical education teachers	3.45	0.87	4.31	0.73	0.247	9
Mean	3.38	0.86	4.29	0.76	0.27	

From Table 4.5, when considering the general picture of priority needs on reflection on the instruction, index (PNI_{modi}) was 0.27. When getting into detail, it was found that sampled physical education teachers wanted to be developed on the ability to clearly express ideas and feeling on student assessment for the first one with the highest priority needs index (0.292). Next one was the ability to clearly analyze and evaluate the situations occurring during the instruction (0.291), and Ability to clearly express ideas and feeling concerning instructional implementation (0.286).

In conclusion on the priority of the 5 aspects of needs, it was found that physical education teachers had the needs to develop the competency on analysis on general condition for the first one following by the Reflecting on the instruction, and setting up the instructional plans and implementing the instruction as shown in Table 4.6 that follows:

Table 4.6 Summary of the Assessment on the Needs for Physical Education Teacher's Teaching Provision Competency Development Model for Promoting Primary Student's Health

Aspects of the Competency	Existing Condition		Desirable Condition		PNI _{modi}	Rank
	\bar{X}	SD.	\bar{X}	SD.		
Analyzing the general conditions	3.19	0.85	4.27	0.70	0.34	1
Reflecting on the Instruction Aspect	3.38	0.86	4.29	0.76	0.27	2
Learner Assessment aspect	3.37	0.85	4.27	0.77	0.27	3
Implementing Teaching and Learning Plan Aspect	3.49	0.87	4.35	0.73	0.24	4
Teaching aspect	3.68	0.94	4.42	0.77	0.20	5

4.1.3 Results of Assessing the Needs for the Method to Develop the Teaching Provision Competency

From questionnaire responses of the physical education teachers on the needs for developing the competency on instructional provision on the 5 aspects ranking along the appropriateness and feasibility of the implementation, the results of the analysis reveal that physical education teachers had the need to develop the competency on physical education instructional provision for the first one in each of the steps as follows:

Step 1 – Paradigm shifting – the physical education teachers had need for the methods of developing competency on physical education instructional provision for the first one following by the seminar, and workshop.

Step 2 – Developing knowledge onto the instructional plans. Regarding this, physical education teachers had the need for methods of developing competency on physical education instructional provision for the first one through the workshop, case study, and training, respectively.

Step 3 – Companionable supervision - physical education teachers had the need for methods of developing physical education instructional provision competency. The methods included companionable supervision, team supervision, and clinical supervision, respectively.

Step 4 – Reflecting on the work done – the physical education teachers had the need for methods of developing physical education instructional provision competency. The methods included learning exchange activity organizing, setting up lesson concluding forum, and setting up exhibition, respectively.

Step 5 – Learning management – the physical education teachers had the need for methods of developing physical education instructional provision competency. The methods included building up teacher network, setting up online learning networks, and, setting up learning transmitting center, respectively.

When considering the need priority, it was found that the first need was the method for the development in the first step – paradigm shifting using training; second step – developing knowledge onto the instructional plans using workshop; third step – supervision with care using companionable supervision; forth step – reflection on the work done using learning exchange activities; and fifth step – knowledge management using teacher networking.

Moreover, physical education teachers had recommended on the goals of physical education teacher development. The goals included competency on organizing physical education instructional activities for the students to joyfully learn without boredom along variety of instructional techniques. The instruction should be integrally organized emphasizing body movement inserted by knowledge provision which was the essence of the love in good health. The process should also focus on synthetic thinking to assure the student's well-rounded development. The model for developing instructional provision competency should fit context of the school which had to build up awareness and provide knowledge, provide budget supports, promote new innovation, carry out companionable supervision and continuously push forward the development.

There should be an establishment of the physical education teacher association or network at the district or educational service area for mutually organizing the activities such as training, contest of school or community health-concerned creative projects, physical education competency of the learners who had been developed, sports competition among the schools in 5 upper north provinces, assessment on the student's health and physical fitness, etc.

4.1.4 A Results of the Study on the Needs for Developing Instructional Competency of Physical Education Teachers via Focus Group Discussion

Focus group discussion was carried out on physical education teachers concerning 3 issues. **Issue 1**-the condition of instructional provision of physical education teachers at the present which included physical education teacher's understanding about the goals of physical education instruction, present instructional behavior of physical education teachers – planning, method, activities, media, and assessment, and problems and obstacles in providing instruction of physical education teachers. **Issue 2** - ideas and recommendations for developing learning providing competency of physical education teachers to promote primary student's health including Competency 1 on analyzing general conditions, Competency 2 on learning provision planning, Competency 3 on implementing instruction, Competency 4 on learner assessment, and Competency 5 on reflecting on the instruction. **Issue 3** – appropriate and feasible guideline for developing all these competencies. The results of the information analysis are as follows:

Issue 1 – Present Condition of instructional provision of Physical Education Teachers

1) Concerning physical education teacher's understanding on the goals of physical education instruction, the focus group came up with a consensus that physical education teachers in general had good understanding on the goals of physical education instruction realizing that physical education was aimed at encouraging the learners to use move activities, physical exercises, games, and sports playing as the

tools for development in physical, mental, social, and intellectual terms including the competencies for health and sports. This was evident in the ideas expressed by one of the physical education teachers as follows:

“...In providing physical education instruction for primary students, the students are like a vase. In molding for anything, the clay must be prepared and well combined to derive a beautiful and strong vase. In preparing the people's readiness to do things particularly in physical education instruction, we should first organize the activities to assure the student's readiness with love in health promotion as it is the beginning of human resource construction. What would follow is the preparation of the muscle readiness as well as the student's discipline which must be implanted through physical education instruction to promote the student's development in the opportunity to come....”

Besides, the focus group also came up with the consensus that physical education instruction depended on many factors varying along the school context. Teacher of the school located in the remote area such as up on the far away mountain would not focus on quality but teach the way they preferred along the way they were good at along the school's conditions and available instruments. Teachers in an in-town school that would like to comply with the quality assurance system would teach along the guideline prescribed by basic education core-curriculum and attempt to comply with the administrator's policy. If the administrators had policy to push forward for physical education instruction to achieve success, the teacher's instruction would succeed as well. On the other hand, if the administrators had not provided any supports and had not recognized the significance of physical education, the instruction would be ignored. It also depended as well on the supports of local administrative organization, community, parents, as well as the students.

2) Concerning instructional behavior of physical education teachers on instructional planning, teaching methods, instructional activities, instructional media, and learning assessment, the focus group mutually pointed out the physical education

teachers who were at middle age and could effectively organize the instruction as it was during the age of quality assurance. The new generation of physical education teachers, however, had short concentration and not always paid attention to the instruction for students of various backgrounds as at the present. The physical generation education instruction carried out at the present was always done along the teacher's style suiting needs of the physical education teachers. They had not done it in student-centered mode. In fact, it was the teacher-centered instruction which had lasted from the past until now. There has been no clear instructional model development to serve as a good practice. This kind of instructional practice had been noted by a male physical education teacher who contended that:

“...I would like to speak out from by direct experience of being involved with the physical education circle. As all of us have spoken out, nowadays the teachers have taught along their desire than being concerned with the children. We have not known what they want. The teachers then simply insert onto the students. We have to far to the point of having those who like or dislike it. We have not been able to educate both the one who like and those who don't like physical education. Those who don't like it may be the talented ones who would develop negative attitude towards physical education and do not like to learn physical education forever. Some of them like it and are enthusiastic to learn. The student-centered instruction may help. It is remarkable that in the past we had the physical education teachers were enthusiastic in teaching the subject. They had the students play football and the teachers would take the chair to sit under the tree observing the students who were joyfully played the football. The teachers assessed the students by observation as many of us would have done. We do it without any clear assessing instruments...”

From another perspective, however, a female teacher had cited her experience in organizing the instructional plans by designing the after-class health promotion activities after basing on the students:

“...Physical education teachers like us have to set up the instruction plan and set the equipment needed ready. The kids would then be interested in the activities we provided. This is the teaching method...Then we would have to think how to make them learn the way they like. We could offer the activities after school for the students to choose the play the sports of their interest. This is what we plan for the teaching period as it was very short but student's needs are much more than that...”

The focus group agreed that physical education instruction should be planned in written form with standard procedural steps, namely, body warm-up, explanation, demonstration, practice, application, and learning assessment. The teachers might follow through all the steps but might not do them continuously through the whole year due to the problems of lacking equipment or there were other activities coming up, etc., delaying the instructional provision. Moreover, there was a remark that physical education teachers were always weak on the assessment. Most of them depended on observation without instrument sometimes or if they had some, it would be the ready to use forms available in the bookstore. Such form, however, would not be much useful as, in fact, assessing physical education outcomes required time to be done and it should be done on individual basis.

3) Concerning problems and obstacles of the instructional provision of physical education teachers, the physical education teachers who took part in the focus group discussion agreed on the fact that they had many other tasks to do as reflected by two teachers as follows?

“...I have to teach physical education, serve as a scoutmaster, work as a cashier, take care of the school's supplies, etc. It seems physical education teachers have to do

everything, particularly student caretaker. Physical education teachers are often appointed as homeroom...”

“ ... My task – first, being a chauffeur, second a student caretaker, when a student gets sick I have to drive him or her to hospital. When the Principal has me go, I have to go ...”

Moreover, the teaching behavior or technique was still the same. That is the students were allowed to play whatever they like without any policy, budget, facility, and media and material supports from the school. The instructional media, sports equipment, gymnasium, indoor sports gym, etc. would facilitate the physical education instruction. The heat would lessen the student's interest. Certain good instructional activities had disappeared and were no longer provided such as rhythmic activities, physical exercise bases, basic movement, etc. Besides, there were problems on gender in which male physical education teachers had become less and less and there were not enough teachers who directly graduated with physical education degree resulting the shortage of physical education teachers who had good instructional skills. Another problem was the school emphasized general academic achievement than physical education due to the school's having realized the significance of physical education instruction as it did for other learning strands forcing physical education teachers to dismiss the class sooner.

Issue 2 – Result of the Analysis on the Opinions and Recommendations on the Physical Education Teacher Instructional Competency Development for Promoting Primary Student's Health

The focus group provided opinions and recommendation for the development of physical education teacher's teaching provision competency to cover 5 competencies as follows. **Competency 1- General conditions analysis** - This competency was for analyzing the strengths, weaknesses, opportunities, and threats of the student's health promotion in the physical education instruction on health promotion, policy on the promotion, media, facilities, and supports provided by parents and local community for physical education instruction for health promotion. Consequently, there was a need to develop the teachers before they could be competent in setting up the effective instructional plans. The analysis should also cover the

readiness of the facilities and linking physical education to the curriculum, and school's policy and focus. These were important and had to be made clear. Supports by administrators were important. Physical education teachers had to understand the focus and policy of the administrators. Besides, there should also be the analysis on the capacity and interest of the learners and readiness of the local community and local administrative organization.

Competency 2 - Instructional Provision Planning – This competency was the ability to use the results of general condition analysis to set up the instructional provision plans by using the contents to fit the situation, setting up learning objectives congruent with the indicators, selecting instructional technique and method, and media relevant to the contents and objectives, selecting appropriate evaluation and evaluative criteria which should have been appropriated prescribed, etc. The focus group agreed that everything listed for teacher development was the thing physical education teachers had normally done. The most important thing was the teaching technique which had to be appropriate to achieve the objectives as well as the skills to cope with the problems occurring.

Competency 3 – Instruction Implementation – This competency was the ability to prepare the facilities and environments facilitating learning. It included creating good learning facilitating atmosphere, proceeding the instruction along the planned steps, linking prior knowledge with the coming up one, opening opportunity for students to have body movement by actual practice, building up student's confidence while practicing, stimulating student's eager to learn or practice, creating joyful and challenging learning atmosphere, opening opportunity for all students to choose the activity of their aptitude and interest, act out their ability or present their work, to criticize their classmate's capacity or works, and to ask, and to express ideas. Teacher should open opportunity for the students practice their analytical thinking, synthetic thinking, problem solving thinking, and creative thinking, as well as concluding knowledge by themselves.

The focus group also commented that to have students conclude knowledge themselves would be difficult because they were still young. Opening opportunity for students to criticize their classmate's ability or works was quite a sensitive issue which might lead to negative consequence. The term "Criticize" should

be changed to “Provide comments or suggestions.” What should be added up were the creation of the atmosphere that promote good learning for the students and the instruction should follow the physical education instruction standard procedure including body warm-up, explanation, practice, cool-down, and conclusion and evaluation. It should open for the students to choose the activity of their aptitude and interest. The teacher had to appropriately organize the instructional activities and stick to the safety along the anatomy principles to assure the student’s confidence on the safety.

Moreover, the focus group had pointed out that, in opening opportunity for students for asking and expressing idea, training students on analytical thinking, synthetic thinking, problem solving thinking, and creative thinking, and having students conclude the knowledge by themselves, the teacher should have been developed on the skills of using questions to stimulate the students to think, conclude knowledge along the principles, and promoting student’s sportsmanship, unity, rule respect, judging respect, and maintaining of sports spectating manner. The teacher should also set up the activities to encourage students to search for knowledge on health from various resources and apply the knowledge acquired to their everyday life for maintaining good health.

Competency 4 – Learner assessment – This competency was every important. It covered the ability to assess the learner’s learning starting from constructing and checking the quality of the instrument. The teacher should open opportunity for students to take part in form of self-evaluation. The process included the operation along the planned procedure using the instruments designed. The teacher should use variety of instruments to gather the information before analyze it in a correct way before using the results analyze evaluate the students. Thus the analysis of the instrument was important. Afterward, the teacher presented the results to each of the students as well as his or her parents to keep them informed on continuous basis. The results were also used for improving the instruction and planning the learning provision for the learner’s development. The evaluative results should be organized in an understandable way. All these were the weakness of physical education teachers and should be the focus of the teacher development. The focus group also suggested to

change the statement from “ opening opportunity for students to take part in the evaluation” to be “opening opportunity for students to do self-evaluation.”

Competency 5 – Reflection on the instruction – This competency was the ability to describe the teacher’s ideas and feeling on the conditions having been analyzed, the physical education instructional provision to promote health, instruction and student evaluation, the instructional situations, and the solutions on the problem occurring during the instruction. In doing so, the teachers could learn from what they have done and be more prepared from doing them again in the next round of instruction. They could also reflect their ideas and feeling on the instruction carried out by their colleague physical education teachers and provide recommendation for solving the problems occurring during their colleague teachers teaching in a reasonable way. The focus group agreed that physical education teachers had to be developed on concluding individual work, analyzing and evaluating one’s own instruction for self-development. There should be a mutual supervision among the physical education teachers to have learning exchange. There should also be an evaluation on the instruction by students but the teachers had to be mentally developed to have open-mindedness leading them to accept the information and use it for instructional development. However, the culture on supervision by which the teacher dared not reflect the fact on instruction having been observed to their colleagues still existed at the present.

Issue 3 - Appropriate and Feasible Guidelines for Teaching Competency Development – The focus group’s collective opinions concerning this had come up with 5 competencies as follows:

Competency 1 – General condition analysis - The focus group agreed that this competency was important. The process could be done through training, seminar, learning exchange, and supervision and follow-up. The conditions for the success were the eager to learn on part of the physical education teachers and moral supports on teacher development of the concerned agencies.

Competency 2 - Instructional provision planning - The appropriate guideline for developing this competency suggested that the teachers should learn this through the experience of knowledgeable persons or model teacher. The teachers could also learn through the idea mobilizing sessions such as seminar or working on the issue.

Competency 3 – Implementing the instruction – The competency should be developed through various methods including classroom visit and peer-assisted learning process.

Competency 4 – Learner assessment – To acquire this competency, the teacher had to start with studying documents such as handbooks in side which had example. The development process should construct the handbooks for the teachers to study and set up the forums for learning exchange on continuous basis. Physical education teacher network for this purpose should be set led by teachers with academic ranks to encourage and support the physical education teachers to learn and develop themselves.

Competency 5 – Reflection on the instruction – This competency could be developed through informal supervision, companionable supervision, reflection from the learners all of which could be used for teacher development.

The focus group had opinion congruent with the need priority for developing every physical education teacher's teaching provision competency. The priority started from the general condition analysis, followed by reflection on the instruction, learner assessment, Instructional provision planning, and Instruction implementation, respectively.

4.2 Results of the Construction and Quality Improvement for A Physical Education Teacher's Teaching Provision Competency Development Model for Primary Student's Health Promotion

From the need priority study using questionnaire to ask opinion of physical education teachers and the focus group discussion, it was found that physical education teachers had the needs for developing their competency on general condition analysis for the first one, followed by the ones on instructional reflection, learner's assessment, setting up the learning provision plans, and the instructional plan implementation. The researcher had synthesized the empirical results with the results of literature reviews on concepts and theories to design and develop the model for the competency development. These literatures included the concepts on human resource development suggested by Swanson (2001) basing on the principle of using the existing resources in an economical and worthy to get the highest benefits. The principles also included the

concerns with experience and reinforcement to motivate the target group to learn toward development. Adult learning theory proposed by Knowles (2005) which was based on the needs of the adults and their self – directing ability and ability to utilize their experience to learn. The principle of teacher development toward professionalism proposed by Clarke (1994) emphasized on building up the sense of participation in the development process on part of the teachers along their volunteer. The principle of building up the sense of participation proposed by Hord, et al. (1987) used in the process of conveying the teachers to adopt and apply the new innovation. Concerning teacher development toward professionalism, Sparks and Louks – Horley (1990) contended that the teachers would gain the highest effectiveness of their learning when they wanted to learn or had realized the problem and had wanted to solve the problems by integrating their experiences with the learning. The principle of companionable development proposed by Amornvivat, Sumon (2004) covered the principles of heart giving, heart pooling, heart setting, and heart opening. Principle of mentoring proposed by Ibrara (2008) had focused on providing mentoring for each individual developing subject and small group of them to follow up and to assure the instructional provision achieve the set goals. The focus group served as the space in which members learned together through mutual analysis and reflection and whatever happening in the constructive atmosphere. From synthesizing all these related researches and literature, the model for developing teaching provision competency of physical education teachers to promote primary student's health was developed with the goals, principles, process, and evaluation on the development. The model was composed of 3 components whose details are as follows:

Component 1 – Development Direction – This was guideline for operating the development process to be used by the developer to carry out the development. This component was composed of the following subcomponents, namely:

1. Development goals – This part included 2 goals, namely, 1) to develop the instructional provision competency of physical education teachers in analyzing the general conditions, setting up the learning provision plans, implementing the instruction, learner assessment, and reflecting on the instruction; 2) to promote student's health promotion through the physical education instructional provision that led to healthy body having regular moving behavior, physical exercise, and sports playing, healthy mind

having good attitude toward moving, physical exercise, and daily life sports playing, healthy social condition having good relationship with friends, family members, and surrounding people, and healthy intelligence having ability to think analytically, synthetically, and creatively, and think how to solve the problems.

2. Development principle – This principle was to be used by the developers in carrying out the development process from the start to the end composed of 1) Companionable development principle (Amornvivat, Sumon, 2004) covering heart giving which included faith building, trust building, and development acceptance, heart combining which included team working, combining forces to multiply their effect, sincerity to push forward the development toward the desirable direction, heart setting which included industry, persistence, and efforts for the development without giving up to the problems or obstacles, setting up a clear development system, and following the plans, heart opening which included self-acceptance and listening to others, 2) It was the development relevant to the problems and needs of the teachers who joined in with volunteerism and had participated through all the steps of the development process beginning from planning to implementing, assessing, and accounting for the results emerging (Hord and others, 1987) , and, 3) It was the development basing on the counseling and care providing mentoring assistance (Ibarra, 2008).

Component 2 - Development Process – This was the step of development to set up the objectives, contents, methods, media/learning resources, and roles of the developers. There were 3 procedural steps, namely, Step 1 - Paradigm Shift & Study onto Lesson Plan, Step 2 - Approach to the fieldwork & Mentoring, and Step 3 – Sharing the lesson learned.

Component 3 – Assessment of the Development – There were 2 types of assessment as follows:

1. Assessing along the development goals s – This was the assessment before and after the development on 5 aspects of physical education teacher's teaching provision competency: General condition analysis, Setting up learning provision plans, Implementing the instruction, Learner's assessment, and, Reflection on the instruction. It also included the assessment on the student's health in 4 aspects, namely, Physical health – their moving behavior, physical exercise, and sports playing; Mental health - feeling and opinions of students on body movement, physical exercise, and sports playing; Social

health – feeling and opinion of the students on classmates, family members, and surrounding people, and; Intellectual health – the ability to carry out analytical thinking, synthetic thinking, and problem solving thinking, and creative thinking of the students.

2. Assessing along the development objectives – It was the assessment along objectives having been set at each step of the development process as follows:

2.1 Step 1 – Paradigm shift and study onto the plans – The step was aimed at building up the awareness of the teachers to be developed to realize the significance of physical education studying for solving health problem, and roles and significance of physical activities for health promotion by providing knowledge and understanding on the principle of physical education learning provision to promote health using brain-based learning principle as well as the ability to appropriately set up the learning provision plans for physical education to promote health and could practice to correctly check on the student's physical fitness.

2.2 Step 2 – Approach the fieldwork and mentoring – This step was aimed at studying on planning and providing physical education instruction for health promotion using brain-based learning approach on part of the teachers having been developed and to get supports, assistance, mentoring, and guidance on physical education instructional provision for health promotion using brain-based learning principle.

2.3 Step 3 – Sharing the lesson learned – This step was objectives to facilitate the teacher being developed to exchange learning and experiences from physical education instructional provision for health promotion using brain-based learning principle, conclude the knowledge gained from the process of developing competency on carrying out the physical education instruction for student's health promotion and the presentation of the works done by the teachers having been developed. From analyzing literatures on developing the teacher instructional competency mentioned above, the researcher had constructed the structure of the model composing various components as in Figure 4.1 below.

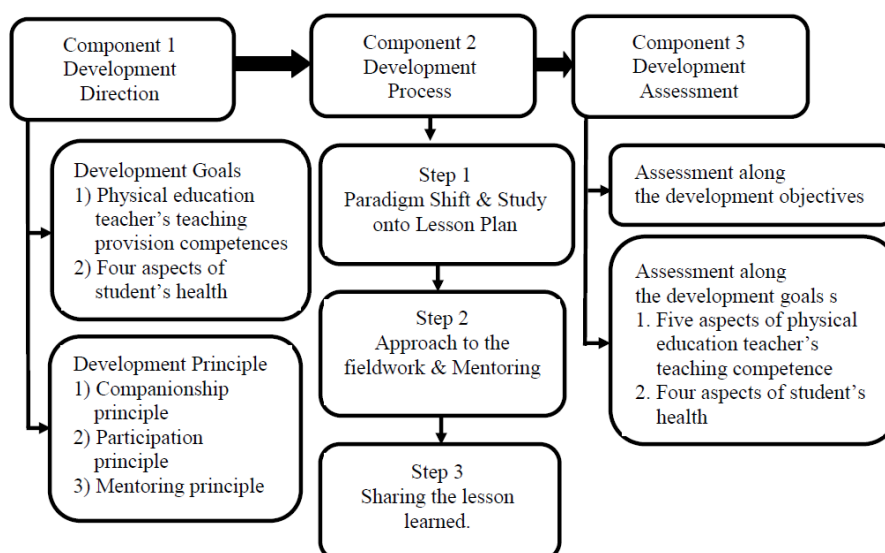


Figure 4.1 Model for Developing Physical Education Teacher's Teaching Provision Competency for Primary Student's Health Promotion

Afterward, the researcher had created a handbook on using the model of developing physical education teacher's teaching provision competency to promote primary student's health, as shown in appendix c, and had asked 8 experts to validate its quality in 4 aspects, namely, feasibility, appropriateness, correctness and sufficiency, and usefulness. Results of 8 expert's validation are presented in Table 4.7 – 4.11 as follows:

Table 4.7 Mean and Standard Deviation of the Scores on Opinion of the Experts on the Quality of A Physical Education Teacher's Teaching Provision Competency Development Model for Primary Student's Health Promotion in Feasibility Aspect

Evaluative Point	Evaluative Result		Level
	\bar{X}	SD.	
1. The model could actually be used for developing physical education teacher's instructional provision competency for student health promotion	4.38	0.74	Much
2. The model could assure the feasibility that physical education teachers would accept the results of the development.	4.38	0.52	Much
3. The model was easy to understand had no difficulty in being into practice.	4.13	0.99	Much
4. Using the development model could enable physical education teachers to set up the learning provision to promote health onto the students.	4.63	0.52	Most
Average Mean	4.38	0.71	Much

Table 4.7 shows that the experts had believed that the development model for developing the physical education teacher's teaching provision competency to promote primary student's health had the feasibility at much level with the mean of 4.38 and standard deviation of 0.71.

Table 4.8 Mean and Standard Deviation of the Scores on Opinion of the Experts on Quality of A Physical Education Teacher's Teaching Provision Competency Development Model for Primary Student's Health Promotion on Appropriateness Aspect

Evaluative Point	Evaluative Result		Level
	\bar{X}	SD.	
1. Development direction is appropriate and congruent to the principle and goal of the development	4.38	0.74	Much
2. Development process is appropriate and congruent to the 3 development steps as follows: 2.1 Step 1 – Paradigm shift and study onto the plan are congruent to Step 2- entering the field and mentoring.	4.38	0.74	Much
2.2 Step 2 – Entering the field and mentoring are congruent to Step 3 lesson exchange and lesson extraction.	4.25	0.71	Much
3. Development process is appropriate and congruent to the development goals.	4.63	0.74	Most
4. Development assessment is congruent to: 4.1 development goals	4.63	0.52	Most
4.2 Objectives of development steps	4.63	0.52	Most
5. Development model is appropriate and congruent to the physical education teacher's competency instructional provision development for promoting student's health.	4.50	0.76	Much
Average	4.48	0.66	Much

In Table 4.8, the experts regarded the model of developing physical education teacher's teaching provision competency to promote primary student's health was appropriateness at much level with the mean of 4.48 and standard deviation of 0.66.

Table 4.9 Mean and Standard Deviation of the Scores on Opinion of the Experts on Quality of A Physical Education Teacher's Teaching Provision Competency Development Model for Primary Student's Health Promotion on Correctness and Sufficiency Aspects

Evaluative Point	Evaluative Result		Level
	\bar{X}	SD.	
1. Development model is valid on development steps	4.75	0.71	Most
2. Development steps are valid and congruent to the development goals.	4.75	0.71	Most
3. The contents of the development model are valid and congruent to the goals of physical education teacher's instructional provision competency.	4.25	1.04	Much
4. The contents of the development model are sufficient for developing the instructional provision competency of physical education teachers.	4.00	1.07	Much
5. The contents of the development model cover all the of physical education teacher's instructional provision competency.	4.13	1.13	Much
6. The model's assessment is valid along:	4.38	0.74	Much
6.1 development goals			
6.2 Development objectives	4.38	0.74	Much
7. Development assessment covered all the development goals s	4.13	0.83	Much
Average	4.34	0.88	Much

Table 4.9 shows that the experts had regarded the model for developing physical education teacher's teaching provision competency to promote primary student's health were correctness and sufficiency at much level with the mean of 4.34 and standard deviation of 0.88.

Table 4.10 Mean and Standard Deviation of the Scores on Opinion of the Experts on Quality of A Physical Education Teacher's Teaching Provision Competency Development Model for Primary Student's Health Promotion on Usefulness

Evaluative Point	Evaluative Result		Level
	\bar{X}	SD.	
1. The development model is useful for developing physical education teacher's teaching provision competency to promote primary student's health.	4.63	0.52	Most
2. The development model is useful for student health promotion.	4.50	0.53	Much
3. The development model could be used as the guideline for developing competency of physical education teachers in providing instruction for student health promotion.	4.50	0.76	Much
4. The development model could be applied in the effort of student health promotion.	4.50	0.76	Much
5. The development model is useful in enhancing the school's quality.	4.38	0.74	Much
Average	4.50	0.64	Much

In Table 4.10, experts had regarded the physical education teacher's teaching provision competency development model to promote primary student's health was usefulness at much level with the mean of 4.50 and standard deviation of 0.64.

Table 4.11 Mean and Standard Deviation of the Scores on Opinion of the Experts on Overall Quality of A Physical Education Teacher's Teaching Provision Competency Development Model for Primary Student's Health Promotion

Quality Aspects	Evaluative Result		Level
	\bar{X}	SD.	
Feasibility	4.38	0.71	Much
Appropriateness	4.48	0.66	Much
Correctness and Sufficiency	4.34	0.88	Much
Usefulness	4.50	0.64	Much
Average	4.42	0.74	Much

Table 4.11 shows that experts regarded the quality of the model for developing physical education teacher's teaching provision competency to promote primary student's health was appropriateness, correctness and sufficient, and usefulness at much level with average mean of 4.42 and average standard deviation of 0.74.

4.3 Results of the Study on Effectiveness of A Physical Education Teacher's Teaching Provision Competency Development Model for Primary Student's Health Promotion

This research step was the study on effect of the development model on the teaching provision competency of physical education teachers and health of the students and the study on the quality of the model in the opinion of the sampled physical education teachers who had taken part in the development project. The results of the study are as follows:

4.3.1 Effectiveness of a physical education teacher's teaching provision competency development model for primary student's health promotion was studied covering 5 aspects, namely, 1) General condition analysis, 2) Learning provision planning, 3) Implementing the instruction, 4) Learning assessment, and, 5) Reflecting on the instruction, and 4 aspects of student's health – physical, mental, social, and intellectual aspects. The results came out as follows:

1) Physical education teacher's teaching provision competency was the competency in providing teaching of 12 physical education teachers on general condition analysis, learning provision planning, instruction implementation, learner assessment, and reflection on the instruction, evaluated by experts, school administrators, and physical education teachers themselves. The evaluation was carried out before and after using the development model. The results of the comparison are shown in Tables 4.12 – 4.18 as follows:

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Table 4.12 Mean and Standard Deviation of the Scores on Physical Education Teacher's Teaching Provision Competency on General Condition Analysis before and after Using the Development Model

No.	Sub-competency	Before		Level	After		Level
		\bar{X}	SD.		\bar{X}	SD.	
1.1	Analysis on policy to support physical education instruction for health promotion	3.28	0.78	Moderate	4.17	0.61	Much
1.2	Curriculum analysis on standards for health and physical education strand	3.50	0.74	Moderate	4.36	0.59	Much
1.3	Analysis on readiness on facilities, media, and supports for physical education instruction for health promotion	3.58	0.55	Much	4.44	0.56	Much
1.4	Analysis on health of students on individual basis	3.53	0.61	Much	4.36	0.54	Much
1.5	Analysis on physical fitness of students on individual basis	3.53	0.61	Much	4.28	0.70	Much
1.6	Analysis on supports of parents and network for the instruction	3.33	0.63	Moderate	4.17	0.56	Much
	Average	3.46	0.66	Moderate	4.30	0.60	Much

In Table 4.12, physical education teachers had competency on teaching provision in the aspect of general condition analysis before using the development model at moderate level with 3.46 mean and after using the model at much level with 4.30 mean showing higher trend.

Table 4.13 Mean and Standard Deviation of the Scores on Physical Education Teacher's Teaching Provision Competency on Instructional Provision Planning Before and After Using the Development Model

No.	Sub-competency	Before		Level	After		Level
		\bar{X}	SD.		\bar{X}	SD.	
2.1	Using the results of general condition analysis to organize the instructional provision plans	3.31	0.58	Moderate	4.08	0.37	Much
2.2	Setting the learning objectives covering knowledge, skill, and attitude	3.42	0.55	Moderate	4.28	0.45	Much
2.3	Selecting the learning activities congruent to the contents and objectives	3.50	0.65	Moderate	4.42	0.60	Much
2.4	Selecting learning media/ resources congruent to the contents and objectives	3.50	0.70	Moderate	4.39	0.60	Much
2.5	Prescribing assessing methods and instrument congruent to the objectives	3.28	0.70	Moderate	4.33	0.53	Much
2.6	Constructing and checking quality of the assessing instrument along the assessing criteria	3.17	0.61	Moderate	4.03	0.51	Much
2.7	Setting up the assessing criteria congruent to the contents and students	3.28	0.66	Moderate	4.25	0.50	Much
	Average	3.35	0.64	Moderate	4.25	0.53	Much

In Table 4.13, physical education teachers were rated on their competency on teaching provision in the aspects of planning before using the model at moderate level with 3.35 mean and after using the mode at much level with 4.25 mean showing higher trend.

Table 4.14 Mean and Standard Deviation of the Scores on Physical Education Teacher's Teaching Provision Competency on Implementing the Instruction Before and After Using the Development Model

No.	Sub-competency	Before		Level	After		Level
		\bar{X}	SD.		\bar{X}	SD.	
3.1	Setting up facilities contributing to student's learning	3.50	0.61	Much	4.42	0.55	Much
3.2	Carrying out instructional activities along the steps of physical education instruction	3.58	0.60	Much	4.58	0.50	Much
3.3	Organizing instructional activities along the student's readiness	3.61	0.60	Much	4.53	0.51	Much
3.4	Creating the classroom atmosphere to facilitate learning	3.81	0.52	Much	4.58	0.55	Most
3.5	Having students engage sufficiently in the activities	3.75	0.44	Much	4.67	0.53	Most
3.6	Caring and assisting students on safety	3.72	0.57	Much	4.72	0.51	Most
3.7	Organizing group activities to encourage students to learn together	3.47	0.51	Much	4.44	0.56	Much
3.8	Having students exchange learning and conclude knowledge	3.22	0.48	Moderate	4.22	0.59	Much
3.9	Opening opportunity for students to ask concerning the activities being engaged	3.53	0.56	Much	4.47	0.56	Much

Table 4.14 (cont.)

No.	Sub-competency	Before		Level	After		Level
		\bar{X}	SD.		\bar{X}	SD.	
3.10	Creating group and individual learning activities	3.42	0.60	Moderate	4.36	0.59	Much
	Average	3.56	0.57	Much	4.50	0.56	Much

Table 4.14 shows that physical education teachers had average competency on implementing the instruction at much level with the mean of 3.56 before using the model and at much level with mean of 4.50 which was on the higher trend.

Table 4.15 Mean and Standard Deviation of the Scores on Physical Education
Teacher's Teaching Provision Competency on Learner assessment
Before and After Using the Development Model

No.	Sub-competency	Before		Level	After		Level
		\bar{X}	SD.		\bar{X}	SD.	
4.1	Assessing congruent to and covering all of the objectives	3.42	0.60	Moderate	4.25	0.44	Much
4.2	Assessing many times along each of the learning activities	3.44	0.61	Moderate	4.17	0.45	Much
4.3	Opening opportunity for students to take part in the assessment	3.31	0.52	Moderate	4.28	0.51	Much
4.4	Interpreting the results of the assessment relevant to the objectives	3.17	0.56	Moderate	4.03	0.45	Much
4.5	Systematically organized the assessment results which could be validated at any time	3.25	0.69	Moderate	4.25	0.60	Much
4.6	Using the evaluative results to correctly analyze the instruments	3.17	0.65	Moderate	4.08	0.55	Much
4.7	Using the evaluative results improve the teacher's instructional provision	3.39	0.55	Moderate	4.19	0.52	Much
4.8	Using the evaluative results to organize the school physical education activities	3.33	0.59	Moderate	4.22	0.59	Much
	Average	3.31	0.60	Moderate	4.18	0.52	Much

In Table 4.15, the physical education teachers had teaching provision competency on learner assessment before using the development model at moderate level 3.31 mean and at much level with 4.18 mean showing higher trend.

Table 4.16 Mean and Standard Deviation of the Scores on Physical Education
Teacher's Teaching Provision Competency on Reflecting on the Instruction
Before and After Using the Development Model

No.	Sub-competency	Before		Level	After		Level
		\bar{X}	SD.		\bar{X}	SD.	
5.1	Concluding and recording the results of instructional provision for all of the objectives	3.25	0.60	Moderate	4.19	0.47	Much
5.2	Concluding the problems and obstacles emerging during instructional provision	3.33	0.59	Moderate	4.50	0.51	Much
5.3	Clearly providing guideline for student development	3.22	0.54	Moderate	4.31	0.52	Much
5.4	Providing relevant guideline for improving the instructional provision	3.39	0.60	Moderate	4.25	0.50	Much
	Average	3.30	0.58	Moderate	4.31	0.51	Much

Table 4.16 shows that physical education teachers had teaching provision competency on reflecting on the instruction before using the model at moderate level with 3.30 mean and at much level with 4.31 mean after using the model showing higher trend.

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Table 4.17 Mean and Standard Deviation of the Scores on Overall Physical Education Teacher's Teaching Provision Competency Before and After Using the Development Model

No.	Competency	Before		Level	After		Level
		\bar{X}	SD.		\bar{X}	SD.	
1	General condition analysis	3.46	0.66	Moderate	4.30	0.60	Much
2	Learning provision planning	3.35	0.64	Moderate	4.25	0.53	Much
3	Instructional implementation	3.56	0.57	Much	4.50	0.56	Much
4	Learner assessment	3.31	0.60	Moderate	4.18	0.52	Much
5	Reflecting on instruction	3.30	0.58	Moderate	4.31	0.51	Much
	Average	3.41	0.62	Moderate	4.32	0.56	Much

Table 4.17 shows that physical education teachers had overall teaching provision competency before using the model at moderate level with 3.41 mean and after using at much level with 4.32 mean showing higher trend.

Table 4.18 Results of Comparing Mean Scores of Physical Education Teacher's Teaching Provision Competency Before and After Using the Development Model

No.	Competency	Before		After		Z	Asymp. Sig (2 –tailed)
		\bar{X}	SD.	\bar{X}	SD.		
1	General condition analysis	3.46	0.28	4.29	0.30	3.06**	.002
2	Learning provision planning	3.35	0.27	4.25	0.26	3.06**	.002
3	Instructional implementation	3.56	0.27	4.50	0.31	3.06**	.002
4	Learner assessment	3.31	0.27	4.18	0.21	3.06**	.002
5	Reflecting on instruction	3.30	0.27	4.31	0.29	3.06**	.002
	Average	3.41	0.27	4.32	0.23	3.06**	.002

** at 0.01 level of statistical significance

Comparing teaching provision competency mean score of physical education teachers before and after using the model, it was found that before taking part in the development program, the teachers had mean score on for all the 5 competencies of 3.41 which was at moderate level. After taking part in the program, the mean scores of the 5 competencies increased to 4.32 which were at much level. When significance test on the difference was applied, it was found that the teaching provision competency of the teachers was higher than before taking part in the program a .01 statistical significance level.

2) Effect on Student's Health – The effect would be on 4 aspects of health, namely, physical health, mental health, social health, and intellectual health. The information was acquired through questionnaire and test on 289 sample size students before and after using the model for developing physical education teacher's teaching provision competency for primary student's health promotion. The results are as follows:

2.1) Physical Health – This health included moving behavior, physical exercise, and sports playing of the students. It included 3 sub-behaviors, namely, 1) engaging in the daily activities using up body energy to the point of being tired, sweating, and, faster heart beating, 2) Moving or physical exercise continuously using large muscle, and, 3) avoiding staying still for a long period of time. The questionnaire constructed by the researcher composed of ten 8 level rating scale items was used to ask students about their moving behaviors before and after using the development model. The results are as shown in Table 4.19 as follows:

Table 4.19 Frequency and Percentage of Students on Their Moving, Physical Exercising, and Sports Playing Behaviors Before and After Using physical Education Teacher's Teaching Provision Competency Development Model

Engagement in the Activities in a Week	Never		Do it 1-2 days		Do it 3 – 5 days		Do it more than 5 days	
	f	(%)	f	(%)	f	(%)	f	(%)
Before Using the Model	44	15	63	22	72	25	111	38
After Using the Model	25	8	55	19	74	26	135	47
Level	Need Improvement		Fair		Good		Very Good	

Table 4.19 reveals that, after using the development model, students had more moving behavior, physical exercise, and sports playing. They did it at very good level for more than 5 days per week from 38% to 47%, at good level for 3-5 days per week from 25% to 26%, and at fair level from 22% to 19%. For those who never do it, number of students decreased from 15% to 8%. It could be concluded that 73% of the students had health behavior at good and up level.

2.2) Mental Health – This type of health was the feeling or ideas of the students on body moving, physical exercise, and sports playing. The instrument was the questionnaire composed of 10 three-scale items asking about such behaviors before and after using the model. The details were concluded in Table 4.20 as follows:

Table 4.20 Frequency and Percentage of Students on Their Opinion on Moving, Physical Exercising, and Sports Playing Before and After Using physical Education Teacher's Teaching Provision Competency Development Model

Opinion	Much		Moderate		Little	
	f	(%)	f	(%)	f	(%)
Before Using the Model						
+ Positive statement	165	57	105	36	19	6
- Negative statement	51	18	72	25	166	57
After Using the Model						
+ Positive statement	213	74	67	23	9	3
- Negative statement	36	13	56	19	197	68

From Table 4.20, it was found that students had opinion on body moving, physical exercise, sports playing, along the better trend. They agreed with the positive statement at much level increasing from 57% to 74% and agreed with the negative statement at much level decreasing from 18% to 13%.

2.3) Social Health – This type of health was the feeling or opinion of students toward friend, family members, and surrounding people using the questionnaire constructed by the researcher. It was composed of 15 three-scale items asking student's opinion before and after using the development model. The results in details were summarized in the appendix d which could be briefly concluded in Table 4.21 as follows:

Table 4.21 Frequency and Percentage of Students on Their Opinion on Friend, Family Members, and Others Surrounding Them Before and After Using physical Education Teacher's Teaching Provision Competency Development Model

Opinion	Much		Moderate		Little	
	f	(%)	f	(%)	f	(%)
Before Using the Model						
+ Positive statement	88	30	123	42	79	27
- Negative statement	52	18	117	40	121	42
After Using the Model						
+ Positive statement	220	76	46	16	22	8
- Negative statement	30	10	69	24	191	66

Table 4.21 reveals the better trend of student's opinion on friends, family members, and surrounding people after using the model. They agreed with the positive statements at much level increasing from 30% to 76%, and agreed with the negative statements decreasing from 18 % to 10%.

2.4) Intellectual Health – This type of health was the student's competency on analytical thinking, synthetic thinking, problem solving thinking, and creative thinking measured by the thinking process skill form constructed by the researcher. The form would ask student to examine the statement, picture, and then respond to the question used with the students before and after using the model. Details were presented in appendix d, and could be concluded as in Table 4.22 below:

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Table 4.22 Frequency and Percentage of Students Who Had Competency on Analytic thinking, synthetic thinking, problem solving thinking, and creative thinking before and after Using physical Education Teacher's Teaching Provision Competency Development Model

Thinking Competency	Excellent		Good		Fair		Not Passing the Criterion	
	f	(%)	f	(%)	f	(%)	f	(%)
Before Using the Model	46	16	61	21	179	62	3	1
After Using the Model	230	80	51	18	8	2	0	0

Table 4.22 reveals that students had competency on analytical thinking, synthetic thinking, problem solving thinking, and creative thinking after using the development model along the better trend than before using the model. After using it, the students had competency at good and up levels from 37% to be 98% and only 2% who could not pass the good level.

4.3.2 Quality of the Physical Education Teacher's Teaching Provision Competency Development Model for Primary Student's Health Promotion

The quality covered feasibility, appropriateness, validity and sufficiency, usefulness, satisfaction with participation in the development program as rated by the sampled physical education teachers. Details of the examination were presented in appendix d and could be briefly summarized in the Table 4.23 as follows:

Table 4.23 Mean and Standard Deviation of the Scores on Assessing Quality of
Physical Education Teacher's Teaching Provision Competency
Development Model for Promoting Primary Student's Health

Quality Aspects	Mean	S.D.	Level
Feasibility	4.68	0.47	Most
Appropriateness	4.30	0.70	Much
Validity and Sufficiency	4.69	0.46	Most
Usefulness	4.70	0.46	Most
Satisfaction with Participation in the Development Program	4.55	0.61	Most
Average	4.59	0.56	Most

Table 4.23 reveals that the physical education teacher's teaching provision competency development model to promote primary student's health had quality at most level for all the aspects with the average mean of 4.59 and standard deviation of 0.56. The problems, obstacles, and recommendations for the development are follows:

1. School administrators should participate in the development as it is useful for all the concerned sides to utilize the physical education moving activities.
2. Time for performing the activities was to minimal and not sufficient. The development activities should be organized for the whole semester to assure the clear impact. Some schools had limited number of teachers some whom had been burdened by a lot of task and could not participate in every activity. Materials and supplies were not on readiness and insufficient. There should be supports from outside as the school's budget was limited.
3. The application of the knowledge and experiences gained from the development had not been fully done.
4. Some students had overweight because of too much eating without physical exercise. There should be the physical fitness test to make the student informed about his or her fitness to stimulate him or her toward more body movement and physical exercise and be trained on problem solving thinking.