CHAPTER 5

Conclusions, Discussion and Recommendations

The objectives of this research were to develop a model of career education for highland and remote area schools. Mixed methods research was utilized following three steps as follows.

Step 1: Applied quantitative research method to obtain the data of general conditions, problems, and methods of career education for highland and remote area schools. The population of this research was the administrators, the academic teachers, and the career and technology teachers of highland and remote area schools under the Office of the Basic Education Commission of Thailand in 11 provinces and 24 educational service areas, comprising of 4,302 persons in total. In addition, qualitative research method was used to obtain the more data to complement the data obtained from quantitative research by enhancing an understanding of general conditions, problems, and methods of career education. Also, it helped to study the model of career education in terms of concepts, principles, purposes, relevant factors, strategies, methods of career education, and assessment from 5 schools which had good performance: 1) Udomsitthisuksa School under Kanchanaburi Secondary Educational Service Area Office 8, 2) Baan Huay Rai Samakkhi Secondary School under Chiang Rai Secondary Educational Service Area Office 3, 3) Ban Muang Kued School under Chiang Mai Primary Educational Service Area Office 2, 4) Ban Mueng Karn School under Chiang Rai Primary Educational Service Area Office 4, and 5) Ban Namphuron School under Nan Primary Educational Service Area Office 2. The instruments applied comprised of a questionnaire on general conditions, problems, and methods of career education for highland and remote area schools, an interview, an observation form, and a note form of document study on general conditions, problems, and model of career education of highland and remote area schools which had good methods. Data obtained from quantitative research was analyzed by mean ($\overline{X}$) and standard deviation (S.D.); then, it was compared to the criteria. Content analysis was used to analyze data obtained from qualitative research.

Step 2: Design, create, and validate the quality of the model of career education for highland and remote area schools. The sample group for quality verification consisted of 50 experts in education for highland and remote area schools and in career education. The instrument was the questionnaire for verifying the quality of the model of career education for highland and remote area schools. It was a rating scale questionnaire containing questions of feasibility, appropriateness, adequacy, utility, agreement, and propriety. Mean and standard deviation were applied to analyze the data obtained from rating scale questionnaire and were then compare to the criteria.

Step 3 : Try out and visualize the lesson plan by applying the model of career education for highland and remote area schools. The population of this trial and the result of applying the model comprised of the administrators, teachers, and personnel of Banpayaprai School, Mae Fah Luang District, Chiang Rai Province. The instruments used for data collection were the questionnaire to study the general condition of the proceeding and satisfaction of career education for highland and remote area schools, the check form of students' accomplishments resulting from career education, and a group lesson to reflect on lessons which were the result of the trial of the model of career education. Analyzed the mean (μ) and standard deviation (σ) and compared the general conditions of the proceedings and satisfaction of career education for highland and remote area schools of the administrators and teachers before and after the trial by using the percentage of development score. The data obtained from the interviews of the boards of schools and lesson visualization was analyzed by content synthesis. Summarize the analyzed data to use to verify the results of the trial.

5.1 Research Results

The research for developing the model of career education for highland and remote area schools disclosed the findings below.

1. Results of the study on general conditions, problems, and methods of career education for highland and remote area schools:

1.1 In regard to the general conditions and problems of career education for highland and remote area schools of the schools in highland and remote areas, it was found that most of the schools provided career education from Prathomsuksa 4 to Matthayomsuksa 3, with a focus on agricultural careers. There was teaching and learning in career and

technology subjects, compulsory subjects, and activities. Moreover:

With regard to using potential of the area for career education, the operation sequence of using distinctive potential of human resources and local wisdom of the area, using distinctive lifestyles and careers of the community, and using distinctive potential of natural resources of the area to use for career education were found to be at a high level. The problems that were found to be at the low to moderate levels were the problems of using distinctive potential of location, climate, and landscape of the area for career education, studying and surveying careers, analysis of potential of the area for career education, and using distinctive potential of human resources and local wisdom of the area for career education.

With regard to participation and creation of a network for the development of career education, the operation sequence found at the high level were the aspects of the school personnel, parents and communities under the school service area, and educational institutes, vocational colleges, universities, and other government sectors for career education. The problems that were found to be at the low to moderate levels were the problem of cooperation and participation creation with educational institutes, vocational colleges, universities, and other government sectors for career education, and the problem of cooperation and creation of participation in setting up a curriculum. The aspect that had low a problem level was cooperation and creation of participation of the school with local organizations for career education respectively.

With regard to internal procedures of the school, resource and learning resource management that were found to have an operation sequence at the high level were appropriate personnel allocation of the school for career education, setting up the school's policy for career education, and setting up a school development plan for career education. The lowest operation sequence was found in the aspect of the preparation of operation rooms or school shops for career education. The problems found to be at the low to moderate level were the preparation for operation rooms or school shops for career education, the problem of personnel development, and the problem of setting up the school policy for career education respectively.

With regard to curriculum development, it was found that the operation sequences that were at the high level were setting up a vision of career education, setting up curriculum structure, and setting up the guidelines of measurement and assessment for

career education respectively. The problems found to be at the low level were the problem of career and technology subject development for career education, creating lesson plans to support career education, setting up a vision of career education, and setting up a curriculum structure for career education.

With regard to teaching and learning plans, it was found that the overall operation sequences found to be at the moderate to high level were simultaneous teaching and learning in theory and practice, setting up an appropriate schedule for teaching and learning plans for career education, and assessment focusing on practical performance. The aspect with the least operation was career camp teaching. The operation problems found to be at the low level and were consequence in order as the problem of teaching and learning plan by job training in the real workplace, setting up career camp teaching, and public relations and understanding of career teaching and learning procedures.

With regard to supervision, the overall operations found to be at the high level were supervision of development of ability to set up teaching and learning for personnel and supervision of development of measurement and assessment of career education of the school respectively. The problems found to be at the low level were the problem of supervision of development of measurement and assessment systems, supervision of development of curriculum for career education, and supervision of development of cooperation and network for career education of the school.

1.2 Method of career education for highland and remote schools found that:

In regard to using the potential of the area for career education, the method was to promote the school to teach career subjects consistent with the context in which the school must analyze how the school's context has career potential and use workplaces in the area as learning resources.

In regard to participation and network creation for educational development, the method of career education was for the school to create cooperation of both internal and external cooperation in terms of thinking, doing, and admiring. This internal cooperation created confidence in creating external cooperation. However, the benefits of the school and the sectors providing the cooperation should be considered.

The methods of resource and learning resource management were setting up a clear school policy for career education, using appropriate resources in the area, such as knowledge, learning resources, workplaces, and materials, for the highest benefit by

emphasizing personnel development along with building development, and integrating career education resources that would be beneficial for other development, such as scenery development or building reconstruction.

With regard to curriculum development, the method of career education was for the school to design curriculum considering potential and appropriateness with the resources of the area. The entrepreneurs were able to be involved in considering the contents of the curriculum and the experts in curriculum helped in developing the plan systematically. Moreover, the objectives of the curriculum would be considered from the learners' ability in the career, the demand of that career in the labor market, the possibility of administrating curriculum in terms of time, instructors, equipment, and materials, and arranging it as a compulsory subject because it would be more sustainable than being arranged as a community activity or club.

With regard to the teaching and learning plan, the methods of basic career education emphasized teachers to set a teaching and learning plan focusing on individual practical performance in which the teacher should comprehend career teaching by focusing more on the potential of the career than on creating products. At the same time, teaching content should be up-to-date and practical for performing the career in the future. Teachers had to educate the learners to be diligent, patient, and determined and to have the characteristics suitable to each career. Supporting learners to have earnings during study was a significant motivation of career education.

With regard to supervision, the methods of career education were to create reliability in the supervisor's and learner's relationship prior to the supervised topic. The supervisor should understand the concept of career education very well. In addition, a Professional Learning Community (PLC) should be created as a tool for sustainable supervision.

2. Results of the study on the career education model of the schools which had good performance indicated:

a) Concepts and principles of career education were to develop the learners to become flourishing humans who were self-reliant, to be able to earn a living with a local career by using schools as a base of development along with the cooperation of all sectors. This education focused on teaching careers that were consistent with the context and potential of the area to respond to different requirements and emphasize professional skills'

performance.

b) The objectives of career education were to teach knowledge and skills of career in order to allow the learners to earn a living during studying, to forecast their careers in the future, to build positive attitudes towards honest careers as well as diligence, patience, discipline, and responsibility, to foster good attributes to perform careers, and to provide opportunities to learners to learn about career.

c) There were three relevant factors for career education. First, the factor of schools' contexts in terms of environment, natural resources, topography, location, professions, traditions and culture, local wisdom, and community learning centers. Second, the factor of community and parental participation. Lastly, the factor of internal procedures of schools which consisted of direction and policy, determination of executives and personnel, readiness of materials, equipment and learning resources of schools, subjects supporting career teaching, ability to plan teaching and learning, and supervision from executives and relevant sectors, for which the interest of students' and parents' attitude were the aimed success.

d) Strategies for career education were to create cooperation and participation of entrepreneurs and schools in networks focusing on careers and working strategies for which schools were the base of development by considering opportunities' strengths moving forward with PDCA and continual public relations.

e) The process of career education began with studying current conditions, schools problems, analyzing strengths, weaknesses, opportunities, and threats, and surveying the interests of students. Then, there were determined a direction and focus point of career teaching before planning human and learning resources, budgets, and schools' curriculums. After that, there was performed the development of teaching and learning by action, using cooperation of networks, establishments, or professional camps that constantly promote earnings during study, supervision in terms of teaching and learning and its results .

f) Monitoring and assessment of career education was an inclusive assessment of all dimensions and components applying participatory assessment. The main success focused on the quality of learners in terms of knowledge, skills, and attitudes towards careers and the satisfaction of parents.

3. Results of development and verification of model of career education for highland and remote area schools were as follows.

3.1 The researcher developed a model of which the main contents were as are concluded below.

a) Four concepts and principles of career education were: 1) provided education using schools as a base of development; 2) the education was focused on knowledge, skills, and attitude towards careers and predicted careers so as to be able to be applied to reality and allow self-reliance; 3) applied participation to all sectors in communities; 4) used potential and natural resources of the area to provide education; and 5) used learning principles, which were the learner centers.

b) The objectives of career education were: 1) to let learners have knowledge and skills in a profession as well as have experience in performing professions appropriately and consistently with contexts of highland and remote areas; 2) to create positive attitudes for learners towards professions, to predict their professional paths, and to attain the basics of a higher education level; and 3) to create opportunities of professional learning for learners in highland and remote areas to search for proficiency and their interests, including self-potential.

c) Factors relevant to career education for highland and remote area schools comprised of three components. First, the factor of potential of the area which consisted of natural resources, arts, culture and tradition, and human resources. Second, the factor of participation and networks for educational development which comprised of government education, community education, and public education. Last, the factor of schools' procedures that consisted of resource and learning resource management, curriculum development, teaching and learning procedure, and supervision procedure.

d) The three strategies of career education for highland and remote area schools were: 1) strategy of the usage of areas and schools as a base; 2) strategy of participation and networks of careers; and 3) strategy of development by SWOT analysis along with operation of the Deming cycle, which consisted of Plan, Do, Check, and Act, by operating development under these significant procedures: resource and learning resource management, curriculum development, teaching and learning procedure, and supervision procedure.

e) Methods of career education for highland and remote area schools applied SWOT analysis and PCDA (Plan Do Check Action).

f) Assessment and monitoring the results from using the model focused on assessment of the results from using the model in terms of the satisfaction of the administers, teachers, and school commissioners with career education and the quality of learners in the aspects of knowledge, skills, and attitudes towards professions. The scope of the assessment included the components of the usage of potential of the area and participation and educational development networks. Career educational development process consisted of resource management, curriculum development, a teaching and learning plan, supervision, and quality of learners in terms of knowledge, skills, and attitudes towards professions. Assessment should focus on the participation of all sectors and have data collection using mixed instruments, both quantitative and qualitative, from all sources to utilize data to consider the assessment results according to the objectives of the model.

3.2 Results of verification of quality of the model of career education for highland and remote area schools by the experts related to education for highland and remote areas indicated that the overall opinion towards the model of career education for highland and remote area schools was in the high level. When considered by aspect, specifically feasibility, appropriateness, adequacy, utility, agreement, and propriety, results were found to be at a high level.

4. Results of the trial of the model of career education for highland and remote area schools, when compared to the operation sequence and the satisfaction of career education of administrators and teachers of the schools that tried out the model before and after the trial, showed that:

4.1 For the usage of potentiality of the area after the trial, almost all aspects increased, especially study, data survey, career sources, and using the distinctive potential of ways of life and careers of communities for career education.

4.2 For participation and creation of educational development networks after the trial, almost all aspects increased, which were cooperation and creation of participation of personnel in schools with parents, communities, and private sector foundations for career education. It was done for participation to become a learning source for career education. Regarding satisfaction, it was found to be higher after the trial, especially the creation of

participation of personnel of schools for career education and the cooperation and creation of participation of instructor with students.

4.3 For resources and learning sources management, almost all the aspects increased. The aspects which had more operation sequence were obviously resources management planning and setting up career education policy. In terms of satisfaction, it was found to be higher after the trial. The aspect which increased the most was the development of schools' personnel and monitoring career education.

4.4 For curriculum development, all aspects seemed to increase. The aspect which had the most increase in operation sequence was setting up a career education curriculum structure, followed by setting up career course instruction, selection of content for curriculum, and setting up appropriate timetables respectively. In terms of satisfaction, all aspects increased. The most increased aspect was allowing the learner to choose the profession to suit their proficiencies and interests, followed by setting up career course instruction and setting up career education curriculum structure.

4.5 For teaching and learning plan, it was found that all aspects increased. The most increased aspect was applying theoretical and practical teaching and learning plans, followed by setting up teaching and learning in community learning sources, and setting up a teaching and learning plan by using external instructors or local wisdom respectively. In terms of satisfaction, all aspects increased. The most increased aspect was setting up teaching and learning in community learning sources and applying a theoretical and practical teaching and learning plan.

4.6 For supervision after the trial, all aspects were found to have increased. The aspect which had the most increase in the operation sequence was supervision of development of career education curriculum development, followed by supervision of development of ability of personnel to set up a teaching and learning plan, and supervision of development of a measurement and assessment system for career education.

4.7 For quality of learners, results from career education for highland and remote area schools after the trial were found to be increased. The aspect which had the most increase in quality was working accurately and systematically, followed by learners having skills in using instruments and equipment to produce work safely, selecting appropriate instruments and equipment, and learners having management skills, with which to be able to set up a working system, individual work, and teamwork to achieve goals

efficiently.

4.8 For satisfaction of the commissioners of the schools that tried out the model of career education for highland and remote area schools, after the trial, most of the commissioners of schools were found to agree that operating career education was appropriate to their contexts as it helped students to learn a career and set an example, which was consistent with the requirements of the learners and community. Moreover, the commissioners of the school were satisfied with the ability and quality of students who learned career education. However, they agreed that it would still take time to come to a conclusion that career education would be able to develop career skills of learners or not.

5. Results of lesson visualization resulting from using the model of career educational of the trial schools found that:

5.1 Most results of operation sequences that resulted from the trial of the model of career education achieved the objective. There was only one aspect that did not, that of promoting learners to look for a career suit to proficiency and interest because the school could not provide the variety of career courses.

5.2 Procedures or activities that were the weaknesses of the operation of career education were creating participation, particularly budgeting materials for career training from local organizations for which the school submitted the request at an inappropriate time, so the request failed. The weakness of the resource and learning resource management aspect was the limitation of personnel who lacked knowledge and skill in teaching and learning planning to teach careers to students. The weakness of curriculum planning was not setting up a variety subjects and not fulfilling the requirements of the learner, including unclear instruction on subjects that affected the quality of teaching and learning. The weakness of the teaching and learning plan was teachers using a lecturing style rather than encouraging students to think and discover by themselves, and the activities were assignments rather than career training. The weakness of supervision was that the supervisors, especially the administrators, who undertook the burdens had interruptions from external tasks, so they could not follow the supervision plan.

5.3 Procedures or activities that were the weaknesses of the operation of career education were the usage of potential of the community for career education because the community was aware of and gave importance to the career and the leadership of administrators, who were able to convince the community to trust the career education

teaching of schools and the readiness of learning sources and local wisdom for the creation of participation of local establishments because entrepreneurs require skillful laborers while schools and establishments had a good relationship, which resulted in the support of budgets for materials for career training of schools because the administrators were aware of its important and gave support so the school had budget for spending.

5.4 Results of the review on requirements, instruments, and mechanisms for supporting a better career education were the training of personnel to have higher teaching skills or hiring skillful personnel or instructors to teach, gathering external resources and budget to purchase sufficient teaching tools and equipment, and developing a marketing system as a channel for distributing students' products.

5.5 Suggestions which required action in aspects of change and improvement for better career education of the schools that tried out the model were creating accurate concepts of career education for all personnel. Realizing the importance and necessity of career education that would facilitate the efficient operation and receive support and cooperation from all sectors. At the same time, schools should set a consistent policy to develop career education to have continual development when there were changes in personnel at any level. The Office of the Basic Education Commission of Thailand should improve the support system of personnel, budget, and instruments appropriately.

5.2 Discussion

1. The main content of the concepts and principles of this developed model of career education for highland and remote area schools was educational development of the learners to become perfect in terms of knowledge, skills, and attitude, to be able to be self-reliant and live happily in their community, and to earn a living in the community without leaving their hometown, by using schooling as a base of development and participation of all sectors. Moreover, schools should focus on teaching careers consistent with the context and potential of the area to respond to various requirements of learners with practical training. This was consistent with the *Four Pillars of Education of UNESCO* (2011) which comprises of: 1) Learning to Know: education should promote learners to learn and comprehend more than to remember and to be able to apply knowledge and experience to develop occupational skills presently and in the future; 2) Learning to Do: education should promote learners to apply academic principles to practical principles and

to create relationships between real working conditions and conditions in textbooks; 3) Learning to Live Together: education should be a tool to educate people of all races, cultures, and classes to accept pride and differences to live together happily; and 4) Learning to Be: education should promote the learners to develop themselves to be perfect people in physical, intellectual and moral aspects, to learn to build relationships with others, and to be good members of their community. It was in accordance with Amaret Sila-On (2552 cited in Office of the Basic Education Commission of Thailand, 2554 p. 2), Prawet Wasi (2555), and Sumon Amornvivat (2555), who stated the importance of career education, that general education was seen as important but career education was more necessary. In the past, education did not teach people to earn a living, so students did not know what they were keen on or what they should learn. Thus, there were numbers of students who studied for what they were not proficient at doing. Thus, the method of development was grouping students by proficiency and allowing them to choose what they like and train themselves to have thorough knowledge.

2. Objectives of career education of the developed model were to allow learners to have career knowledge and skills, to be able to earn a living during studying, to see possible career paths, to have a good attitude towards an honest occupation, to be diligent, disciplined, and responsible, to have good attributes for earning a living, and to create learning opportunities for learners. It was consistent with the methods of developing education for highland and area schools of the Office of the Basic Education Commission of Thailand (2552) which needed to increase education opportunities for the school-aged population in highland and remote areas to have quality education with the various models of education. Moreover, career education provided opportunities for outreach students in highland and remote areas to finish basic education, to develop knowledge and skills necessary for living, and for earning a living according to their proficiency and potential. It was also in accordance with objectives of career education for outreach students in highland and remote areas (Office of the Basic Education Commission of Thailand, 2554 p.3) in which required to educate the attribute of being honest, diligent, patient, self-reliant, responsible, and sacrifice which were the attribute of person who earn a living honestly. Students valued career creativity, chose proficient and interesting occupations, which was consistent with the requirements of community, society, and the world, had the opportunity to train and earn money from the career, which allowed them to understand the value of

money and spend money reasonably by becoming wise consumers by applying Sufficiency Economy Philosophy principles, which is consistent with the sustainable education concept.

3. Factors relevant to career education for highland and remote area schools consisted of three aspects: 1) factor of potential of the area, 2) factor of participation and educational development networks, and 3) factor of internal procedures of school. Each factor could be explained as follows.

3.1 For the factor of potential of area, the usage of distinctive potential of human resources and local wisdom in aspects of ways of life and career and natural resources of the area for career education were consistent with the policy and strategy for 2555 of the Ministry of Education, which emphasized schools to be aware of the potential of the area by analyzing which costs of schooling affected the production quality, differences, and competitive opportunities at the local and national levels. Likewise, results of the study from The Office of Strategy Management Upper Northern Provincial Cluster 2 (2554, page 12-14), Commissions for Drafting Strategic Plans for Educational Development for Highland and Remote Area Schools (Office of the Basic Education Commission of Thailand, 2555) , and Career Education Project (Office of the Basic Education Commission of Thailand, 2554 page 12 – 21), all discovered that communities in highland and border areas had unique local wisdom and strengths and plenty of natural learning resources that support learning. Schools that had good performance proposed suggestions for career education that schools should analyze how their contexts for the potential of careers and should promote teaching career subjects, which is consistent with the aspect of using establishments in the area as learning resources. Similarly, results of the study by Siriphan Suwanmakkha et al. (2554), who studied on methods of career education of 24 good performance schools in four regions, showed that career education applied local wisdom to support teaching and learning of successful careers. For example, planting, animal husbandry, and fishery in agricultural fields, weaving, making mats, and music in the arts and culture field, and credit unions, banks, and cooperatives in the trading field. Additionally, it was in line with the suggestions of Nongram Setapanich et al. (2553), who studied secondary education management for individual careers to become SME entrepreneurs and successful career education in secondary school in programs that were consistent with major production and the requirements of communities should be considered to run the course. This was in accordance with suggestions of the Office of the

Basic Education Commission of Thailand (2555 page 11-19) that most local communities in highland and remote areas were ethnic groups that had unique learning resources, knowledge, and local wisdom that would be able to be applied to teaching and learning.

3.2 For the factor of participation and creation of career educational networks, it was found that schools in highland and remote areas had built up participation of internal and external organizations, parents, communities in school service areas, and institutes, vocational institutes, universities, and other government organizations in various ways. It was consistent with results of the study from the high-performance schools that these schools had cooperation with vocational institutes and universities to support academics for teaching and learning. Most of them provided support for teaching and learning and helped develop a career curriculum. Moreover, it was found that the methods of career education for highland and remote area schools in terms of participation and creation of educational networks were the school creating internal and external cooperation to think, act, and admire the internal cooperation that would help build up confidence in creating external cooperation. Benefits of schools and cooperating sectors should be considered. It was in line with principles of the Development of Children and Youth in Remote Areas (Office of H.R.H. Princess Maha Chakri Sirindhorn's Projects, 2555 p. 1-2) stated that a community's participation, of which people were involved in all the school's activities, helped to learn from action, knowledge, and technology that would be transferred to the community for its development while enhancing and strengthening the community and resulting in being self-reliant and having sustainable development. Similarly, Nongram Setapanich et al (2553) and the Office of the Basic Education Commission of Thailand (2555, p. 11-19) noted that one of the factors supporting career education for students in highland and remote areas was the cooperation and support from communities around the school and externally other further communities in terms of physical traits, ideas, property resources, and students' product distribution. All factors facilitated schools to solve problems on insufficient materials, equipment, and personnel which were the school's constraints and to support the success of career education. The relationship between the school and the community members was the main linkage of this cooperation and support. Supoj Prapaipetch (2551) also studied conditions for the success of effective administration in hill tribe schools. It was found that external conditions caused by the community were peacefulness of the people, cooperation of the people, strength of community, and giving

respect between tribes and governing networks. Conditions from the basic education commission of the school were a sense of possession of the school, commission components, outstanding points of the chairperson, and conditions from other organizations' cooperation, e.g. the Sub district Administrative Organization affected school's effectiveness. Moreover, the participatory activities were consistent with the study results of Nongram Setapanich et al (2553) that a community should play a role in: 1) having participation in setting up a school development plan or school charter, 2) having participation in setting up curriculum content, 3) being a learning resource and creating learning networks for learners to experience real situations, 4) supporting learning activities in school, and 5) having participation in educational performance assessment and suggestions for a school's quality development.

3.3 Factors of internal procedures consisted of: 1) resource and teach resource management, 2) school career curriculum development, 3) teaching and learning plan, and 4) supervision, which can be detailed as follows.

1) The resource and learning resource management aspect comprised of human resource management, appropriate materials, equipment, tools, or budget for the school for career education, and policy and career educational development planning. The vital problems found were the readiness of operating rooms or workshop houses, personnel development, and policy set up for career education. In addition, it was found that methods of career education for highland and remote area schools in resource and learning resource management were setting up a policy of career education of school clearly, and using resources in the area, e.g. knowledge, learning resources, establishments, and materials, appropriately and for highest benefit emphasizing personnel development along with development of premises and integrating resources with other developments, such as improving scenery or building repair. All findings were in line with the study results of the Commissions for Drafting Strategic Plans for Educational Development for Highland and Remote Area Schools (Office of the Basic Education Commission of Thailand, 2555), the Office of Strategy Management Upper Northern Provincial Cluster 2 (2554, p. 12-14) and Career Education Project (Office of the Basic Education Commission of Thailand, 2554, p. 12 – 21), which explored the problems of resources management of career education for highland and remote area schools in terms of decentralization of budget and resource management that were insufficient and not continual. Besides, almost all schools had a

vision of academic development so that teaching and learning emphasized academic proficiency and high scores. In terms of educational equipment and budget, premises, buildings, teachers' residences, workshop houses, and technology systems, they were insufficient and obsolescent. The regulation of parcels did not support procurement in highland areas because of high prices. Schools encountered insufficient budget problems because most of the schools were small in size and the budget from the government did not reflect the actual problems, so it did not resolve the problems. Therefore, Siriphan Suwanmakkha et al. (2554) gave suggestions on the methods of career education from an administrative point of view. They stated that it comprised of: 1) policy: having policies set by relevant sectors, such as northern clusters, local sectors, and career promotion sectors, and then school policies would move career educational development forward; 2) knowledge and attitude of personnel: administrators, teachers, commissioners, and communities which had vision gave importance to career skills and having determination for the success of career education; and 3) administration procedure: administrators who administered and followed policy had developed the readiness of learning resources by gathering resources for administration, local wisdom, and linking to external organizations, which were the factors that led to the success of career education. Meanwhile, schools had to make clear and comprehended the concepts and principles of career education and set up curriculum to aid parents to have participation in supporting teaching and learning, such as conducting occupational surveys, inviting parents as guest speakers, and training that helped adjust attitudes and values of people who were responsible and diligent. In addition, there should have been development for career teachers to have more career knowledge and skills by having training or workshops, having relationships promoted between teachers, communities, and the public to develop individual knowledge by learning news and creating faith in students (Nongram Setapanich et al, 2553)

2) In the aspect of career curriculum development, it was found that the operation sequence, setting up a vision for career education, curriculum structure for career education, and setting up methods of measurement and assessment of career education were at a high level. The problems found at the low level were problems of development of career and technology subjects for career education, teaching plans to support career education, setting up a vision for career education, and curriculum structure for career education. Meanwhile, methods of career education for highland and remote area

schools in the aspect of curriculum development were designing curriculum to support occupations for students by considering the potential and appropriateness of resources in the area. The entrepreneurs should have participated in selecting content of curriculum and have experts in curriculum to set up a development plan systematically by setting objectives of curriculum by considering learners' ability to perform occupation, demand of labor market, and the possibility of curriculum administration in terms of time, instructors, material, and equipment. Besides, a compulsory subject was assigned because it would be more sustainable than assigning it as a community activity. This was in line with Nongram Setapanich et al. (2553) who studied secondary education management of successful schools and unsuccessful schools in providing career education. Results found that successful schools chose to run learning plans that were consistent with the demand of the community and its production. They set the content of the subjects to fit with the community's requirements. Similarly, the results of Commissions for Drafting Strategic Plans for educational development for Highland and Remote Area Schools (Office of the Basic Education Commission of Thailand, 2555) , the Office of Strategy Management Upper Northern Provincial Cluster 2 (2554, p. 12-14), and Career Education Project (Office of the Basic Education Commission of Thailand, 2554, p. 12 – 21) found that schools that have curriculum based on curriculum from the central and local curriculum clearly facilitate the consistency of career education and community characteristics. There was a revision of curriculum, and it was integrated with Sufficiency Economy Philosophy; the New Theory, which emphasizes occupations and integration of 8 departments, made career education clearer and more concrete. Some schools identified career education along with general education which had career subjects as selective subjects. Additionally, it was in line with methods of curriculum development for occupational promotion of Ministry of Education (2551, p. 1-35) which suggested schools to develop selective subjects to suit the focus, interests, requirements, and proficiency of learners or to develop the highest potential of learners. This could be done by setting a curriculum structure for basic subjects, selective subjects, and activities to develop learners. Besides, it could be set up separately from the curriculum structure, as in outside the school's timetable on public holidays or during school breaks, during which the school could organize it by themselves or with families, to provide a community based on learners' proficiency and ability in order to apply knowledge and skills on a daily basis.

3) For teaching and learning, it should focus on individual practice in which teachers had to understand the teaching that emphasized more on the potential of each profession than product creation. Content should be up-to-date and useful for the future careers. Teachers had to educate the characteristic of being diligent, patient, determined, and those suited for each careers. Helping learners to earn money during studying was a motivation of career education. The results were in consistent with Office of the Basic Education Commission of Thailand (2553, p. 11-26) which proposed the methods of career education that teaching and learning focusing on the practice, both for skills and trade practice, to allow learners to earn money during studying. Teachers should assist learners in understanding the relationship between knowledge in school and reality and to do interesting, fun, and meaningful activities to help learners have the knowledge, attitude, and skills necessary for the future to be ready for changes. In order to this, the cooperation between parents and community should be promoted to support career education. It was consistent with Swat Udompotch (2543) who suggested that methods of career education should focus on the strengths of each educational level, and teachers should give importance to activities' design that support learners to have: 1) career motivation, 2) career orientation, 3) career exploration, and 4) career preparation. In order to set up a teaching plan for career education, learners should learn how to think logically, accumulate knowledge and skills necessary for working, seek opportunities and channels to work, and explore and enter the working world, for which they should be appropriately developed in their knowledge of career development from 9-15 years old (during elementary school to early secondary school).

4) Supervision should start with trust and a friendly relationship between supervisor and supervisee. Then, aspects for supervision should be focused. The supervisor has to comprehend the concept of career education and build PLC as a tool for sustainable supervision. Supervision consisted of: 1) curriculum management, e.g. providing instruction to teachers in planning and running curriculum and allocating teachers to utilize their knowledge, ability, proficiency, and experience; 2) regular curriculum assessment by using appropriate techniques and tools; 3) teaching and learning activities development, such as supporting teaching by providing curriculum and relevant documents, documents related to budget, and teaching aids; 4) arranging a good environment for teaching and learning; and 5) personnel development, e.g. promoting personnel's potential by meetings,

training, seminars, teaching observations, and class visits. Moreover, promoting career advancement appropriately, creating learning networks and communities in order to give opportunity to teachers to gather for problem-solving and improving teaching, creating cooperation networks with personnel internally and externally via various media were the methods of supervision. It was in line with Hoy and Forsyth (1986: 48) who proposed a clinical supervision cycle procedure, of which the main process comprised of creating relationships between instructor and supervisor. It was a step that led an instructor to the clinical supervision cycle by creating understanding and good relationships between instructor and supervisor, and informing the role of working together with the instructor to make understanding the goal and meaning of clinical supervision cycle. In addition, Glickman, Carl D., Gordon, Stephen P. and Ross-Gordon, Jovita M. (2001, p. 458-460) proposed the successful school supervision procedure which resulted in a school's development. Teaching and learning supervision was focused on teachers' development in aspects of abstracts, missions, and experience. The purpose of supervision was to integrate teachers' professional knowledge with the outcome on the students. The roles of supervisor were to change attitudes of schools' personnel in classrooms that were not independent but were linked with the academic administration of schools. It was consistent with Watchara Laoriendee (2553, p. 282) who suggested the direction of teaching and learning supervision of Thai education in the future under National Education Act of B.E. 2544 and the results of an announcement of the Basic Education Core Curriculum B.E. 2551 in that supervision would become more important in the future. It would focus on three dimensions: instruction development, curriculum development, and staff development.

4. Lesson visualization resulted from applying the model of career education of the schools that tried out the model and showed that there was strength of operation in the aspect of administrators' leadership who were able to analyze and use the potential of the community, learning resources, and local wisdom for career education. Administrators should have a clear policy to create participation and support. It was in line with Nongram Setapanich et al. (2553) who stated that school administrators who were aware of and truly understood the role of administration and took action constantly and seriously would facilitate school development to become successful. Administrators should change from being a commander to a coordinator by cooperating in planning and acting. Administrators should have a clear purpose to promote career teaching, be a developer, and create good

relationships with the community and teachers to motivate and encourage them to work.

Meanwhile, weaknesses of operation were all found. There were the constraints of personnel who lacked knowledge and skills in setting up career teaching and learning plans which were consistent with the review of requirements of tools and mechanisms. The supports to enhance career education operation were training, developing existing personnel to have higher teaching skills, or hiring external staff who had skills in a particular profession. Moreover, it was consistent with the suggestions, which needed action in terms of changes and improvement to better career education operation of schools that tried out the model, which were creating accurate concepts of career education to staff of all levels. Anyhow, personnel who recognized the importance and necessity of career education would help the operation to perform efficiently. The Office of the Basic Education Commission of Thailand should improve the system of personnel, budget, and consumable support that are appropriate to basic education for professions in highland and remote areas.

5.3 Recommendations

1. Recommendations for results application

From all the above findings, there are suggestions for applying the research results as follows.

1.1 Suggestions to the Office of the Basic Education Commission of Thailand

1.1.1 Set a clear direction of career education promotion for highland and remote area schools to encourage schools to have confidence in operation rather than let them make their own decisions as to whether they will focus on core and general education more than career education, or focus on careers more than general subjects. This is because most of the educational contexts of highland and remote area schools are appropriate for career education for learners.

1.1.2 Lessen assessment criteria for educational success which emphasizes learning achievement scores, such as O-NET scores, should suit education of highland and remote area schools, particularly taking benefit from O-NET results for teaching career advancement or academic standing for teachers or administrators. This is because it will make highland and remote area schools focus more on learning for achievement than on increasing career skills, which is more necessary for learners' lives in reality.

1.1.3 Have a plan to produce career teaching personnel to support schools to provide career education efficiently.

1.1.4 Revise budget allocation criteria to appropriate career education because career class learning requires more particular materials and resources than normal class learning.

1.1.5 Review quality of equipment and products relevant to career education to be up-to-date and fulfill schools' requirements.

1.2 Recommendations for schools

1.2.1 In career education for highland and remote area education, administrators are the most important people who lead to success. Anyway, administrators should analyze and use the potential of the area, and promote participation to support education. Moreover, for moving the internal procedure forward, administrators should consider resources and learning resources, curriculum development, teaching and learning plan, and supervision by applying a clinical supervision cycle inclusively in order to achieve the goal of career education.

1.2.2 To set up a teaching and learning plan for the success of learners to have professional skills, learning design from teachers is important to the learning development of learners. Thus, concerned teachers should be aware of and adjust attitudes towards career education, including improving skill of setting up teaching and learning plans consistently by emphasizing practical learning to develop career skills along with education on being diligent, honest, patient, and responsible, which are good qualities of people who earn a living.

2. Suggestions for further research

2.1 Integrate the model of career education to promote and develop analytical skills and other significant skills for the learner in the 21st century.

2.2 Conduct a study to develop the model of career education for schools in different contexts.

2.3 Study to analyze the factors relevant to career education to assure statistical reliability.