

## CHAPTER 5

### CONCLUSION DISCUSSION AND SUGGESTION

The objectives of this study were to (1) study a model for developing the ability in research and development of local curriculum of northern community teachers through the integration of constructionism theory learning process and participatory action research, and (2) study of the results of the model for developing the ability in research and development of local curriculum of northern community teachers through the integration of constructionism theory learning process and participatory action research. The main target group of this research is 15 voluntary community teachers in the non-formal education centers in the Northern Region of Thailand in the areas surrounding Mae Fah Luang District, Chiang Rai Province, with 315 learners (210 learners on culture, 50 learners on herbs, 20 on environment, and 35 on agricultural practices). This research is assisted by 52 local wisdom practitioners: 34 persons on culture, 9 persons on herbs, 4 persons on environment, and 5 on agricultural practices. The research is undertaken between March 2006 and July 2008.

The research tools composed of : (1) The process for developing the abilities in research and development of local curriculum of the community teachers, in this research the CLIPAR constructed by the researcher integrates the constructionism theory learning process with the participatory action research was used for the process, has the 4 step: step 1 exploration, step 2 planning, step 3 implementation of the plan, and step 4 supervising, evaluation, and follow-up of the implementation of the plan to develop community teachers' abilities in research and development of local curriculum, (2) Tools developing the abilities in research and development of local curriculum of northern community teachers are composed of the followings, (a) Documentary media composed of : evaluation criteria, the issues for group discussion, and the books and reports of the research (b) Electronic media composed of : the projector with its equipment and computers and television sets, and (3) Tools for measurement and evaluation abilities in research and development of local curriculum of northern community teachers are composed of the followings, (a) Evaluation criteria on abilities in research and development of local curriculum of northern community teachers, (b) The summary form of the reported scores of the assessments, (c) The record form of the implementation according to the research process, and (d) The record form for the reflection of opinions.

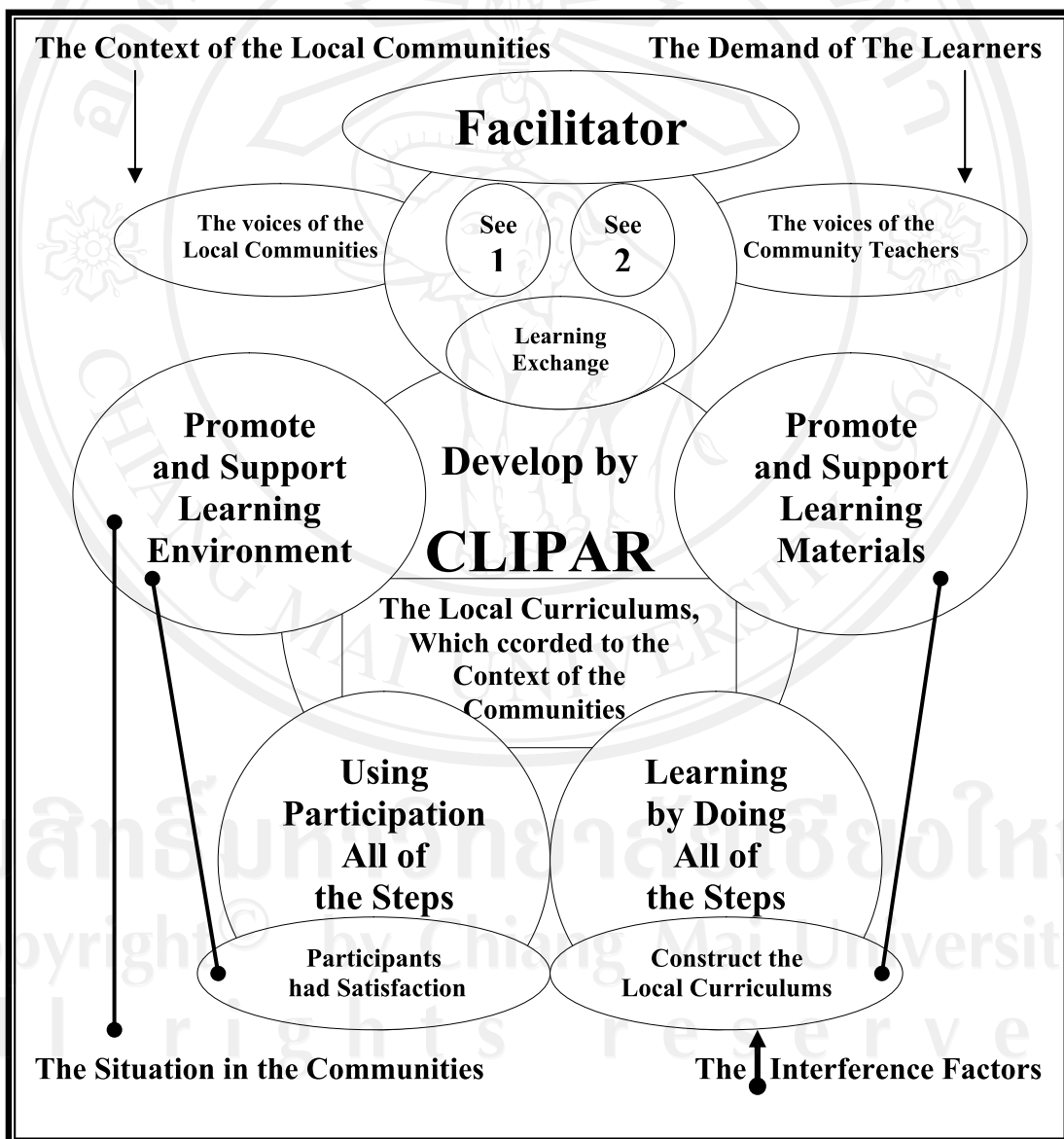
Authentic assessment was used to evaluate the community teachers' ability in research and development of local curriculum by the tools before and after developing the community teachers' abilities by the CLIPAR. This research analyzed the quantitative data with average score and percentage, analyzed the qualitative data with the analysis to establish linkages of events and situations, and analysis of the whole picture of the research implementation through a combination between the qualitative and quantitative data in order to explain the percentage of the development and the related situation or event in order to reflect the whole picture of the research and make the linkage or connection among variables and issues involved.

## Conclusion

The findings revealed that:

**1. A model for developing the ability in research and development of local curriculum of northern community teachers through the integration of constructionism theory learning process and participatory action research were presented by the diagrams as the followings.**

**1.1 DAR&DLC by CLIPAR Model : A Model for Developing the Ability in Research and Development of Local Curriculum by Constructionism Theory Learning Process Integrated with Participatory Action Research**



The DAR&DLC by CLIPAR Model shows that the development of abilities in research and development of local curriculum must consider the context of the local communities, the demands of the learners, the situation in the communities, and

the interference factors occurring during its implementation of the community teachers. The facilitators must analyze by listening to the opinions from the community member and the community teachers. The voices of the local communities should be consistent with the context of the communities and the opinions of the community teachers should be consistent with the demands of the learners. Therefore the preliminary survey of basic situation is necessary to lead to learning exchange for an enhanced learning experience. Good surveys build a good development plan according to the constructionism theory learning process that is integrated with the participatory action research. During the development the evaluation for the progress of the development, the research sets the well- integration of the facilitating climate for the learning as well as supporting media for the learning (promote and support environment and materials for learning). All of the steps emphasize the participatory process and the learning along with actual practice(learning by doing).

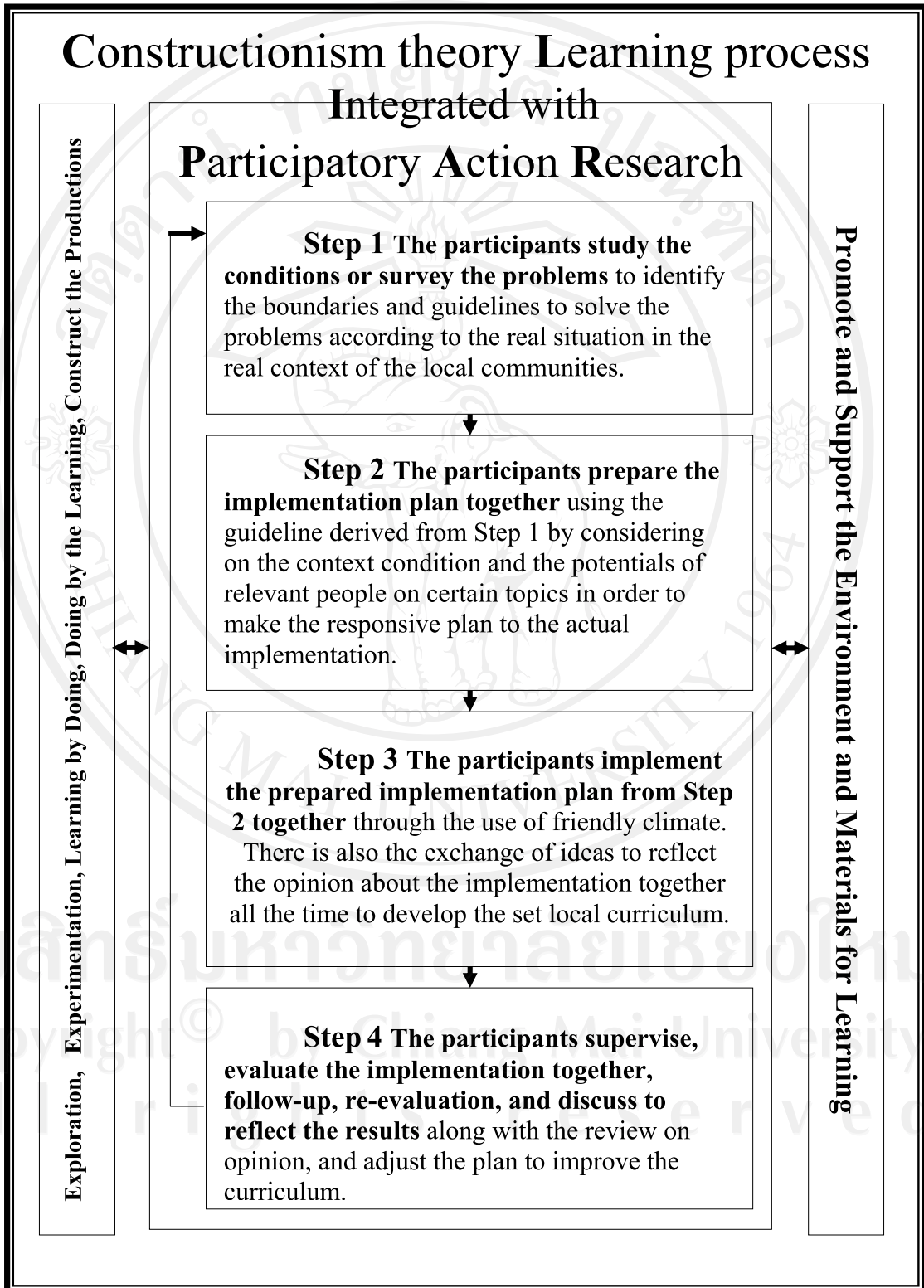
In creating the facilitating climate for the learning, the facilitators must create the learning exchange climate in friendly, hospitable, clear, helpful, and stimulating manners to the group learning. There is activity connecting between the group seminars along with the activities that the community teachers undertake continuously in the communities and the supports related to the media that facilitate the learning. This set of media should be related to the topics that the community teachers need to learn. The source of media is prepared by the learning facilitator and the media that the community teachers look for appears as the results of the actual practices by the community teachers. Each part of this set of learning media is interlinked as each is brought to use as the media that facilitate the learning properly.

Aside from the learning undertaken along with the actual practice, it is also necessary to enable the community teachers to create the knowledge by themselves. They are led to stand on their own feet with their own endeavors. The participatory process in all of the steps is the important basic to develop abilities in research and development of local curriculum of the community teachers by using the CLIPAR as the reinforcement to create the climate for learning together. This method satisfies the participants' needs. In addition, the situation in the local communities has linkage to the learning climate. The interference factors that occur during the development process will surely affect the continuity of the community teachers' work occurrence as well.

The DAR&DLC by CLIPAR Model eventually led to birth of the Local Curriculums that accorded to the context of the communities, which were constructed by the ability in research and development of local curriculum of the community teachers.

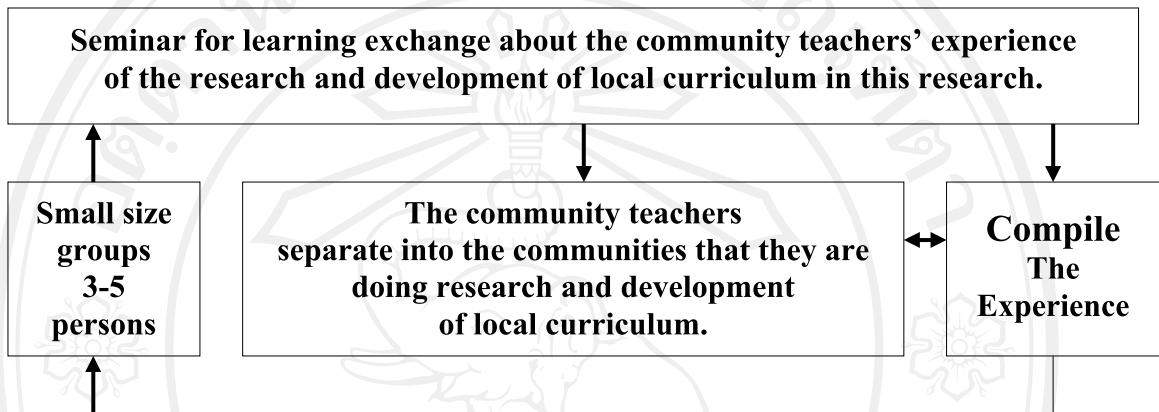
The CLIPAR constructed by the integration of the essential components of the constructionism theory learning process and the essential components of the participatory action research, which constructed the 4 Step: Step 1 Exploration, Step 2 Planning, Step 3 Implementation of the plan, and Step 4 Supervising, Evaluation and Follow-up of the implementation of the plan. The implementation plans throughout Step 1 to Step 4 share similar ways of implementing the cycles. In all steps, the researcher arranges the environment, climate and media to facilitate the learning together continuously and the participants' had participated all the steps in the same time. The CLIPAR Model was presented as the following.

## 1.2 CLIPAR Model : Constructionism Theory Learning Process Integrated with Participatory Action Research Model



In this research finding revealed that the small size group (3-5 persons) had efficiency, when the community teachers wanted to discuss for learning exchange in the deeply problems of the implementations as the following model.

**1.3 The model to arrange small size groups to develop the community teachers' abilities in research and development of local curriculum which is used in the implementation of this research that had efficiency**



**2. The results of the model for developing the ability in research and development of local curriculum of northern community teachers through the integration of constructionism theory learning process and participatory action research as the followings.**

**2.1 The results of development of the abilities in research and development of local curriculum of the community teachers.**

In summary, the whole picture from all topics shows that the community teachers increase their abilities in research and development of local curriculum in rather high level (72.87 percent). Before starting the development process the community teachers have abilities in research and development of local curriculum in the criteria of “should study further” (average score of 0.11) After they pass the development process the community teachers have abilities in research and development of local curriculum in the criteria of “good” (average score of 3.75).

**2.2 The results of the research and development of local curriculum that arise from the development of the ability in research and development of local curriculum of the community teachers.**

**2.2.1 The results of research and development of local curriculum in the group of tradition and culture in the local communities**

The research findings show that the community teachers are interested in doing research and development of local curriculum on the tradition and culture the most (53.33 percent) on eight themes as below.

Theme 1: “Development of the curriculum on the wedding tradition of the Ulo-Akha Tribe by participation of the local communities of Ban Ayo Anamai, Mae Salong Nai Subdistrict, Mae Fah Luang District, Chiang Rai Province.”

Theme 2: “Development of curriculum in preserving the costumes of Lahu Na Group through the participation of the communities at Ban Pha Mussuh, Mae Salong Nai Subdistrict, Mae Fah Luang District, Chiang Rai Province.”

Theme 3: “Curriculum development on preservation of the costumes of Lomie Akha Tribe with the participation of the community at Ban Huay Kra.”

Theme 4: “Curriculum development on the Yao woven clothes by the participation of the community at Ban Lao Sib, Mae Salong Nok Subdistrict, Mae Fah Luang District, Chiang Rai Province”.

Theme 5: “Curriculum development on consuming the new rice of the Akha Tribe with the participation of the community at Ban Pa Kluay, Mae Fah Luang Subdistrict, Mae Fah Luang District, Chiang Rai Province.”

Theme 6: “Research to prepare/make and development of curriculum on the Chinese New Year tradition with the participation of the community at Ban Huay Rai Samakki, Mae Fah Luang Subdistrict, Mae Fah Luang District, Chaing Rai Province.”

Theme 7: “Research to construct and develop the curriculum on folk dance called Ten To and Fon King Ka Lah of the Shan Tribe with the participation with the community at Ban Huy Nam Khun.”

Theme 8: “Curriculum development on the Shan language with the participation of the community at Ban Huay Peung.”

### **2.2.2 Result of research and development of local curriculum in the group of herbs in the local communities.**

The research findings show that the community teachers are interested in doing research and development of local curriculum on herbs as the next highest (20 percent of samples) with three topics as the followings.

Theme 1: “Curriculum development on conserving the local herbs in Ulo Akha Tribe communities with the participation from the communities at Ban Ayo Anamai, Mae Salong Nai Subdistrict, Mae Fah Luang District, Chiang Rai Province.”

Theme 2: “Curriculum development on preservation of the local herbs of the Lahu Na Tribe with the participation from the communities at Ban Ja Thor.”

Theme 3: “Curriculum development on application of herbal medicines to heal ailments with the participation from the communities of the Akha Tribe at Ban Pasang Soong Village.”

### **2.2.3 Result of research and development of local curriculum on the environment of the local communities.**

This research shows that the community teachers are interested in research and development of local curriculum on the environment (13.33 percent of the samples) on two themes as the followings.

Theme 1: Curriculum development on management of the risk of soil erosion with participation with villagers at Ban Pha-bue, Mae Fah Luang Subdistrict, Mae Fah Luang District, Chiang Rai Province.

Theme 2: “Curriculum development on water management for consumption with participation of Ban Mae Poen.”

### **2.2.4 The results of research and development of local curriculum on the group of agriculture in the local communities.**

This research shows that the community teachers are interested in

doing research and development of local curriculum on agriculture (13.33 percent of samples) on two topics as what follows.

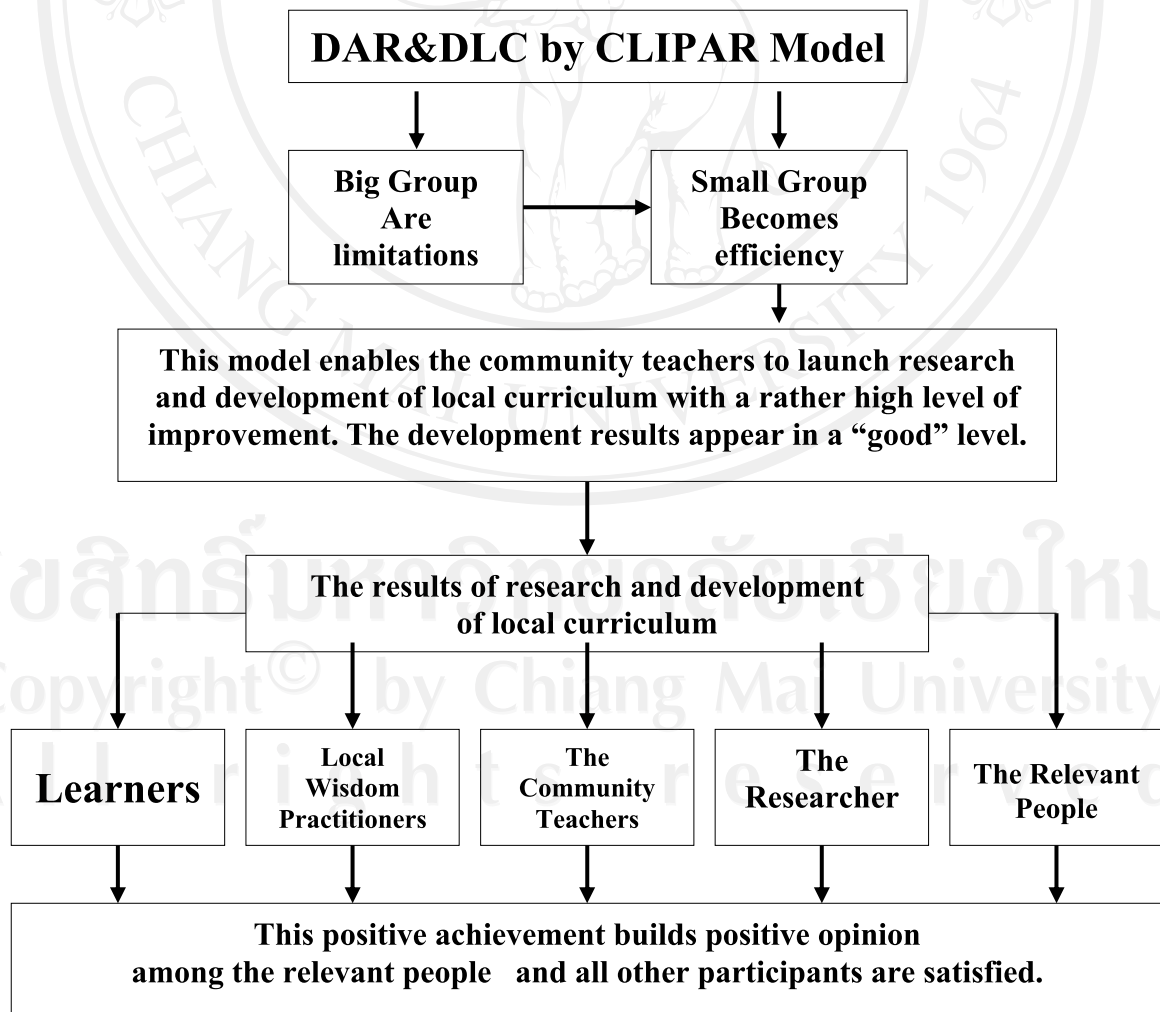
Theme 1: “Curriculum development on planting tea with participation from the local communities at Ban Hua Mae Kham.”

Theme 2: “Curriculum development on raising the native pigs with participation of the local communities at Ban A-lae, Mae Salong-nai, Mae Fah Luang District, Chiang Rai Province.”

### **2.3 The participants’ opinions and feelings toward the participation in this research.**

The positive achievement of the research and development of local curriculum of the community teachers that gave rise to use for the local communities builds positive opinion among the relevant people and all other participants are satisfied.

The all of the findings revealed can conclusion into the diagram of whole picture of the result analysis as the following.



## Discussion

The common goal of the constructionism theory learning process and the participatory action research is the creation of a series of consistent processes starting with the preliminary surveys for the conditions surrounding the learning or solving the problems. Then the researcher prepares the plan, implements the plan, continues with the follow-up actions and revises the implementation plan and re-implementation continuously in cycles.

This research carries the identity and the processes of the steps based on the constructionism theory learning process and the Participatory Action Research that are both integrated together (CLIPAR). Its results appear as the representative of the outstanding and unique identify of CLIPAR, which is seeking for the facts through both the participatory processes to develop the learning emphasizing on the learners and the constructionism theory learning process in all steps within a participatory action research.

This research shows the applicability of CLIPAR in enhancing the abilities in research and development of local curriculum among the voluntary community teachers. The recorded level of the development is quite high (emphasizing both on the abilities in research and abilities in development of local curriculum), which is consistent with the results of the previous researches. The findings of researchers revealed that such process can enhance abilities in research (emphasizing on abilities in research) of the voluntary teachers (Nonformal Education Volunteer Teachers in Mae Fah Luang Subdistrict). The level of development is found to be quite high (Jirachai Booranariththawee, 2003).

Besides, this research also shows that the local curriculum that the community teachers research and develop is accepted with high satisfaction among the learners, the local wisdom practitioners, the relevant people, the community teachers themselves, as well as the researcher. Such findings are consistent with the important issues that Kittiporn Panyapinyophol (2006: 49) has identified that "the willingness of the teachers" can reflect and improve the teaching performance of the teachers themselves. This reflection and improvement leads to the teachers' achievement as the members of successful occupational community. This is also consistent with the research findings of Anurak Panyanuwat et al. (1991) who applied the participatory action research in developing the potentials of the sales personnel of modern packaged medicines (nontoxic) in Lamphun and Chiang Mai Provinces. The findings show that the participatory action research can be used to develop the potential of sales personnel and it creates positive changes on the knowledge, abilities related to the performance, attitudes, experiences and levels of acceptance of the sales personnel among the state institution group and the committees of the drug-selling clubs. This is also correlated with the research findings of Supat Meesakun. (2003) who applied the participatory research action process in the development of teacher potentials in doing the classroom action research at Klonglanwittaya School, Kamphaeng Phet Province. The findings show that such process also can be used for development of teachers' potentials in the classroom-based research.

The research shows that research can bring forth the strength of the process of the constructionism theory learning process integrated with the participatory action research. This integration creates the process in developing abilities in research and



development of local curriculum among the community teachers that promotes the “Power of Team Learning.” The community teachers also create the “Learning to Learn” in solving the problems and developing their own potentials. This is the expansion of the constructionism theory learning process through the participatory action research that emphasizes on seeking for the facts by using the participation processes in all steps and expanding the participatory action research with the constructionism theory learning process. It is the learning process that emphasizes on the learner (learner-centered) in all steps. The process also adds the facilitating climate and media into the learning. The learning facilitators who act as the directors will create the creative learning process together. These facilitators create the community teachers who are able to develop abilities in research and development of local curriculum through the learning along with the actual practices.

In this research process the researcher who acts as the learning facilitator in developing the abilities in research and development of local curriculum among the community teachers by using the CLIPAR. The researcher exchanges the learning together with the community teachers continually. This continuity allows the researcher to develop his own learning as well. There is an interesting issue for the researcher to see when the facilitators, administrators, and the researcher are the same persons and when they are different persons. How the differences in the actual performance can affect the level of development of abilities in research and development of local curriculum among the community teachers.

The results of the Developing of Abilities in Research and Development of Local Curriculum (DAR&DLC) by CLIPAR Model found by this research generally as the whole picture are consistent with the conceptual framework that the researcher has synthesized. This synthesis is emphasized on the participation process and the learning process along with the implementation or practice in all steps by promoting the climate and the media facilitating the learning. There have been studies on the analysis of the community contexts and surveys of the needs and the basic of the community teachers by using the Pre-Assessment to make plan to develop abilities in research and development of local curriculum among the community teachers. The researcher who acts as the learning director creates the learning exchange together consistently during the research implementation. There is also the development on the new conceptual framework expanding from the original conceptual framework stating that the community teachers create linkage to the demands of the local communities, which is consistent with the community context and the demands of the learners. The assessment during the development (Formative Assessment) is undertaken persistently as well as the evaluation after the development process (Post Assessment). In addition, these assessments show that the situation in the communities also affects the climate that facilitates the learning. Furthermore, the results indicate that the interference factors that come from the administration factors especially through the changes of the administrator during the research implementation clearly affect the continuity of the intensity and development of curriculum by the community teachers. The continual evaluation during the development (Formative Assessment) points that after the creation of the learning exchange together, the adjustment of the development model from the big size group seminar into the small-group seminar increases the level of the development of the teachers from each of the small group. The representatives of the groups act as the learning facilitator in arranging the learning

process in each group closely before they begin the learning exchange in big group seminars. This fact means that another thing learned from the original conceptual framework of the research is that there are more “assistance facilitators” during the research implementation. These facilitators reduce the problems occurring in the big group seminars where the researcher as the learning facilitator cannot oversee all of the activities by the teacher groups. Nevertheless, the researcher still considers the important principle of diversity the learning exchange according to the constructionism theory learning practice to create the different climate for each of the small groups from the big group. The teachers keep their chances to gather in bigger group and bring the issues they find in each of the group to be exchanged in the learning together in the big group seminar. This chance brings higher efficiency in the exchange of the learning together by consuming lesser time in big group seminar and learning more deeply in small group seminars. These findings gathered during this research are different from the expectation intercepted in the use of the original research conceptual framework.

The results above suggest that efficient application of the CLIPAR appears in its use with small groups and if it is arranged in a way that all small groups’ members have chance to bring what their groups get and exchange it in the learning in the big group. In these ways the learning exchange becomes more various (Diversity). There also should be study about the methods of development methods for the community teachers to be the learning facilitators by using the CLIPAR in its development.

In addition there are interesting issues in terms of measurement and evaluation for the use of the assessment methods during the development (Formative Assessment). The issue is how much the change of the development of abilities in research and development of local curriculum between the post-assessment of the development process (Post Assessment) and the Pre-Assessment.

The research findings show that the Step that has the biggest change is Step 3 (implementation of the plan to develop abilities in research and development of local curriculum). There are situations as well as variables related with the analysis of the situation in advance to avoid reducing the influence of factors that may cause changes. Another discovery found during the research implementation is the high influence of the administration factor. When there are changes or transfers of the administrator, this research finds that the administrator factor affects the continuity of the work development especially on the research and development of local curriculum, which requires considerable amount of time. When the community teachers are ready, suddenly they lack necessary supports that the continuity of the research and development of local curriculum is disturbed. It is consistent with the research results of Boonreang Kajornsinsin et al. (2006: 48-49) who show that two of the most important factors for the success of the development process of local curriculum with the community participation are the vision and the administrators’ emphasis on the importance of their endeavor.

Besides, it is consistent with Division of Educational Research (1999: 31-34) who finds that the administrators should encourage the teachers sincerely in the implementation of curriculum development and the teaching and learning arrangement by the local wisdom practitioners through proper materials, equipment, the training, and moral supports. These forms of support affect the acceptance of the community members and thus the learners can learn happily and apply the lessons to

daily life. The learners can see the values and build positive attitudes toward arts, culture, and tradition, and the local wisdom practitioners are pleased with their occupations. The local wisdom practitioners build desire to bring progress into their own communities and to bring younger generation to have interests and pride in their own localities.

Such researches share with the findings of this research indicating that the community teachers, local wisdom practitioners, the learners, the relevant people and the researcher are proud to be the parts in this research process to create and develop local curriculum. The whole process is achieved through the participation of the members of the local communities. This whole process increases the community teachers' acceptance among the local communities. In addition the teachers and the administrators also find that the administrators who perform as the learning facilitators produce the facilitating climate to the learning, as well supports (materials, media, equipment and technical knowledge) for the community teachers according to this research process. This finding is consistent with the study of Department of Curriculum and Instruction Development and Sub-Commission on Learning Reform (2000: 5) who also identifies that the school administrators must show leadership, visions, and determination to create the quality system in the schools, and create the facilitating climate facilitating to the learning of the learners and the performance of the teachers.

From such discovery there are issues that should be considered if the researchers strive to solve the impacts of the interference factors in sudden change of the administrators during the research and development of local curriculum. And the next issue for the researcher is how to develop the school administrators into able learning facilitators.

The results of the development on abilities in research and development of local curriculum of the community teachers in the Northern Region through the constructionism theory learning process integrated with the participatory action research generally show a high level of development. On Topic 1 (study and analysis of the context of the local communities that lead to identification of the issues in research and development of local curriculum), for example, the level of development is the highest among the other topics with the percentage of development as high as 79.11 percent. Such result can be attributed to the facts that the community teachers have performed their works continuously in the Nonformal Education Learning Centers and they have studied deeply the demographic data of the local communities for their works. They have the average score of 0.96 during the pre-assessment, which is considered as the level of "should be brought into implementation" or have readily sufficient background. Therefore it is easily understood that the results of the teachers' development reveal the average scores increasing to 4.91 which is in very good level. For Topic 2 (the basic preparation for the implementation of research and development of local curriculum), the level of development is also quite "high" (the second highest or 78.85 percent). This high level can be correlated with the researcher's preparation for the media and the situation that facilitate the learning for the community teachers. The researcher also implements the plan according to the principle of the constructionism theory stating that "the learners must create their own knowledge during the learning through adjustments of their thoughts and the methods to check the fluctuation of the learning results". If a new result appears, the opinions

must be readjusted to rebuild the known knowledge. During the training for thoughts and expressions to support the teachers' development with one another, the teachers create the knowledge from real experience they learn from several methods by themselves. There is the force in the stimulation of the learning potentials on their own continually Suchin Petcharak (2001: 15–30). For the other Topics the community teachers achieve a quite high level the development. This result supports the efficacy of the important principles known in the constructionism theory.

Although on Topic 3 (preparation for the methodological steps of research and development of local curriculum) the teachers gain a quite high level of development, the percentage value of the development stands in the fourth rank (69.87 percent) among five Topics. This fact can be attributed to the time constraints for the consideration of the development plan (see Appendix D), which is set to accomplish in a week. This limitation produces the percentage values of the development on Topic 3 as the lowest. For future research and application of the similar process, the researcher may solve this problem by provision of more time on this Topic.

The Topic in which the teachers reach a high level of development but with the lowest percentage values of development is Topic 4 (step of implementation of research and development of local curriculum according to the plan and/or the prepared research timeline). The development level stands in “moderate” or “fair” level but when the details from the sub-issues show that most of the issues have achieved the high level of development (the percentage values of the development stand between 74.67 and 77.33 percent). There are two sub-issues that reach the development in “moderate” level (2.93 and 2.60) and score the percentage values of the development less than the other issues. These sub-issues are the “discussion of data and the summary of research results” (with the percentage values of the development of 58.67) and the issue of “writing of the technical suggestions and suggesting of practical suggestion” (with the percentage value of development of 52.00) These two sub-issues are the causes of lower percentage values for the development in Topic 4 altogether. The percentage values of the development are calculated from the average scores of the percentage levels of the development in all sub-issues under the Topics.

Consideration of the qualitative data from Chapter 4 for the events happening during the research implementation shows that the time for the community teachers to write discussions, summary of research findings, the development of local curriculum and writing the technical suggestions is the same time for the community teachers and the researchers to accomplish other urgent matters. This time incompatibility reduces the quality of the level of development in the sub-issues because the circumstances fail to facilitate the participants' tasks. Besides, the dire limitation on time disallows the flexibility of the schedule.

However, the presentation of the research findings and the development of local curriculum that the community teachers create through the community participation process, are accepted by the local communities and the relevant sectors. The analysis of the implementation plan for the next year prepared by each of the community teachers shows that the relevant local curriculum issues are inserted by the community teachers to be the tasks to be implemented continuously. Although in practice the community teachers do not get supports in research and development of local curriculum continuously after the transfer or changes in administrator, the

teachers still show their willingness and inner motivation (Internal Motivation) to implement the research further.

The research findings and development of local curriculum have come from the development the community teachers' abilities in research and development of local curriculum. This research shows that the topics related with culture attract the highest interests among the teachers to do research and development of local curriculum. The next interested topics are those related to the herbs. The topics related to the environment and on agricultural practices attract the lowest level of interest. Mae Fah Luang District is a mountainous area or highland with abundant forests but limited farming areas with only two local communities show interest in these topics. Although the topics about environment are familiar, they capture little interest. Only two local communities show interests. The majority of community members must do the miscellaneous jobs on daily base; they do not pay much attention on the environmental issues. On the topics related to the herbs, the implementation in two aspects takes place in three local communities because the local wisdom practitioners in these two aspects are very limited in number. This factor affects the identification of the research issues and development of local curriculum in the communities of each of the community teachers. The topics on culture have the highest number for the implementation of research and development of local curriculum (eight communities). This fact may show that the community members are aware on the diminishing cultural practices. They put the highest urgency and opt to do research together to develop local curriculum in cultural practices. Such results can be correlated to the fact of the felt necessity to develop local curriculum and apply it on culturally related topics including the arrangement of learning exchange among the local wisdom practitioners from many communities to develop the knowledge further. The local wisdom practitioners on the herbs are few. There is thus a necessity to accelerate the implementation of research and development of local curriculum that leads to the explanation. For the environmental issues this research shows that very few community members are interested to learn and implement. Nevertheless there must be more research in creating the awareness on being responsible to the environment along with doing research and development of local curriculum on the environment. This urgency leads to development for the use in the educational institutions to have awareness toward the environment. This increased awareness affects the future environment when the youth groups grow up to adults who would take care of their own communities.

The motivation to build awareness in participation can use the CLIPAR as well as many other methods to participate in thinking of the near problematic issues in the areas of the local communities and preparing the development guidelines that are not too difficult to implement. At the same time these methods allow the participation in thinking, solving problems through simple activities to more difficult ones, and creating the facilitating climate for the worthy exchanging of thoughts and opinions of the participants. One of several techniques to create participation is the conference techniques with participation with the concept of A-I-C (Appreciation–Influence–Control) that emphasizes on the participants' readiness to think, to plan together, and to finalize the plan together. This technique starts from creation of knowledge and awareness about solving the problems together and then leads to the steps of creation of the guidelines for the development and finally ends with the steps in control of the

divisions of work or performance together. The participants in the workshop method called the Future Search Conference consider together the condition of the past, the present condition, and the imagination of the desired future. This action leads to the making implementation plan together in the cycles of participatory development. It starts from the first step, which is the step of thinking process to understand the problems, to consider the options for solutions, to seek for the causes of problems, and to arrange the order the importance of the problems. The second step is related to the process of decision making. The third step is the implementation process and the fourth step one is the responsibility process (Office for Standards in Education, Office of Rajabhat Institutes Council 2002: 119-137)

The discussion above reveals some interesting issues in the application of the future research that would utilize the CLIPAR in creating the awareness, i.e., what are the differences between the A-I-C and the Future Search Conference, or what method would show good results in which situation.

From this research to study the opinions through the qualitative data, there may be some issues that necessitate some researches to create appropriate tools for data collection of the qualitative data from the target groups with diversities in culture and some of whose members are illiterate. The researcher must necessarily use the tools and the methods of the qualitative data including giving training to the community teachers to collect qualitative data as well. The results of data analysis show that in general the participants have positive opinions towards the participation in this research process. The learners, local wisdom practitioners, and relevant people are proud in participating in research and development of local curriculum, and the community teachers know better the local communities where they work. They join the learning about the valuable knowledge from the local wisdom practitioners in the local communities. They are proud to be able to apply research and development of local curriculum by themselves. Moreover, the local wisdom practitioners are proud to be part in transferring the knowledge for the learners in their communities. These facts are similar with the research findings of Piyaporn Chumchan (2003) who brings the research process with community participation to use in developing local curriculum on the topic of production of *Kok* Mat Weaving at Nanangpattanasuksa School Phon Phisai District, Nong Khai Province. The findings show that all steps of the research process can gather all the relevant people to participate in the development of local curriculum on such issues. Besides, the research brings pride to the researcher who participates in such process from the start and willingness to bring what the researcher learns from this research to further use.

The issues found in this research indicate the necessity and possibilities of the implementation to promote the participation of the community teachers in all areas or sectors in research and development of local curriculum within their own communities. The teachers' participation inspires the development and the sustainable transfer of the knowledge from the local wisdom practitioners to the learners in the local communities. Participation is also an important factor that supports the education policy of the government to achieve the outcomes in the plan implementation in concrete forms that emphasize the curriculum development and the life-long education centers in each educational area. The emphasis is also given on the promotion of the decentralization of authority for all sectors participating in the education management, in order to lead to the target of education quality and the

learning that emphasizes on the morality before the knowledge (Abhisit Vejjajiva, 2008: 30). The research and the development of local curriculum according to this research process can be used as the guideline in creating the proper learning climate together and can promote the community teachers' abilities in research and development of local curriculum into its true implementation. The research and development of local curriculum creates awareness of putting first the local communities that drive the conservation of the knowledge of the local together to be transferred to the next generation smoothly. In the implementation it is also necessary to consider the factors on the administrators because this research finds that the administrator is the important factor that influences the implementation of research and development of local curriculum.

Therefore the discussion that leads to the application of the education arrangement on management in various levels requires a beginning at the administrator level. The discussion would be as what follows.

If the policy makers in the ministry level perceive that the research and development of local curriculum is the foundation of the educational development by holding the people-centered development as the solution for the national education management. The policy makers should identify a clear policy and manage to bring the policy into practice otherwise the useful policy will disappear along with the changes in the rank and files of the policy makers. This symptom reoccurs for a long time and thus has become the obstacle in developing the national education because education management requires an uninterrupted development. For example the National Educational Development Plan (2002-2006) has identified that people is the center of the development (Office of the National Education Commission, 2002) This is an improvement from the older concept in the education management to be more consistent with the concept of Kathy Short and Carolyn Burke (1991: 1-4) who stated that whenever the beliefs on the teaching and learning change and the surveys on the learning process point to the needs for participation and the learning centers, the definition of the curriculum will also be changed. In sum, if the policy is the group of words that the persons with authority impose onto the practitioners to believe and implement into the practice change, all the educational guidelines also change. If the persons with authority identify national level policy agree with the concept that the researcher has discussed above and apply the concept to be the standing policy, the guidelines for the educational management tend to change. And if the administrators at the high level are ready to act as the learning facilitators in applying the policy into practice, they have a lot of force in the educational development that is consistent with the real life. The chance that people will be unemployed from the crisis will be lessened and the situation should follow the direction of the country development in the Tenth National Economic and Social Development Plan (2007-2011) that identifies the base or the foundation to support the national fund on both social and economic fund and national resources and environment fund by holding the "people-centered development." This base includes the application of the "sufficient economy philosophy" as the guideline for the implementation to lead to "happy and peaceful society" (Office of the National Economics and Social Development Board, 2007: 47).

The administrators in the higher education level, especially in the Faculty of Education who have many knowledgeable people in the faculty, should have seen that research and development of local curriculum is making linkage of knowledge

between the local communities and the learning process arrangement in the higher education level. The research and development of local curriculum can be developed into a course in the higher education level because it is a subject that emphasizes on the real practice along with the learning. The administrators also should give support to the knowledgeable people in the faculty as the tutors for the community teachers under them or participate as the part of the learning together with the community teachers in research and development of local curriculum. This support is not only the service to the local communities but it can help the discovery of guidelines to develop theory or the media that facilitates the learning process arrangement which is useful for the education widely. Seymour, for example, often brings the team work to traverse around and provide help in developing the education management in the local communities within the countries along with developing the media to facilitate the learning based on the constructionism theory.

The professors in Higher Education Level may apply the evaluation criteria on the abilities on research and development of local curriculum among the community teachers to develop the subjects of “research and development of local curriculum” or as part of a subject entitled “educational research.” The transformation of the research and development of local curriculum into a subject or a part of a subject allows its use in the learning process management for the students. The CLIPAR can be applied in the learning process arrangement to develop abilities in research and development of local curriculum including applying the CLIPAR in the learning arrangement in many subjects or research by applying the CLIPAR into many subjects.

If the educational administrators in the regional office area level understand the valuable identity in the local communities in their jurisdiction, they should promote the worthy school administrators in their affiliated offices to support the community teachers under them to have chance to develop their abilities in research and development of local curriculum. Included in this support is the administrators’ being the core or center in arranging seminars to exchange the learning in research and development of local curriculum and produce a local curriculum databank to serve the community teachers.

The school administrator plays crucial roles in promoting the success of local curriculum. If the administrators have a far vision, they can see the importance of developing local curriculum and supporting the materials, equipment, facilities and moral support to the teachers. These supports would enhance the development of the curriculum that emphasizes the participation of the community with higher chance for success (Boonreang Kajornsinn et al., 2006: 48-49). Besides, there should be more studies to seek for knowledge on research and development of local curriculum to facilitate the learning for the community teachers in research and development of local curriculum efficiently. This research already shows that the administrators’ acting as the learning facilitators influences the success of the development of abilities in research and development of local curriculum.

If the community teachers at whatever levels and affiliations voluntarily develop their abilities in research and development of local curriculum by working in the communities with the administrators’ supports, there is a high possibility of success for the development on abilities in research and development of local curriculum. This research finds out that before the beginning of the development the



community teachers have very little basic on abilities in research and development of local curriculum. After the learning process, however, the community teachers reach a good level of abilities in research and development of local curriculum. They also produce a valuable outcome in research and development of local curriculum, which is developed with local community participation.

This research shows that learning along with the actual practice in small groups of 3 to 5 people produces an effective learning exchange process. Therefore, besides using the participation process among the community teachers, the learners, and the local wisdom practitioners, the learning exchange should be done together with the community teachers' friends also in small groups. This simplicity will create the power of the learning together well.

Beside the rise of continual participation among the community teachers, the local wisdom practitioners, and the learners, the community teachers also build an internal motivation to launch research and development of local curriculum seriously and to create the sense of belonging between the teachers and the local communities, and between the community teachers and the researchers. These findings are similar with the previous researches. Besides the positive changes in knowledge, abilities, attitudes and experience brought by the persons who have passed the development process through the participatory action research, they also can make linkage with the common goals in solving problems together, which is consistent with the principle of the participatory action research (Anurak Panyanuwat et al. 1999).

In addition the research shows about the development of the curriculum on preservation of the costumes of the Lahu Na Tribe. One of the important objectives is the learners' "ability to use the Lahu Na traditional costumes in trend". The local wisdom practitioners and the community teachers will be the ones who transfer and build the linkage of knowledge from the local wisdom practitioners to get along with the contemporary knowledge (Integration of Local and Modern Wisdom).

The results of the work of the teachers above reveal some issues related to the guidelines for integration between the knowledge from the local wisdom practitioners and the knowledge of the modern wisdom practitioners at present; or how to preserve the identity and knowledge of the local wisdom practitioners to be applicable to the present time.

## **Suggestions**

### **Suggestions for the application of the research findings.**

1. The government sector should identify the clear policies to develop abilities in research and development of local curriculum among the community teachers in all affiliated offices and sectors and also facilitate the implementation of the policies into practice more seriously.

2. The professors at the higher education levels should develop the DAR&DLC by CLIPAR Model into a distinct subject or course. It should be the course that emphasizes the actual practice along with the learning and the support by the knowledgeable people in the affiliated offices as the tutors or trainers for the community teachers or as participants of research and development of local curriculum with the community teachers.

3. The educational administrators at the region level in all affiliated offices located near the communities should promote the educational institutes in their

jurisdiction to support and encourage the community teachers under their affiliation to develop abilities in research and development of local curriculum. These administrators should be the central figures in arranging seminars in exchanging the learning on research and development of local curriculum and setting the databank of local curriculum to serve the community teachers.

4. Transfers of the administrators or relevant personnel should be done through the good governance principles by considering the replacing administrators or personnel who can take over the unfinished works of previous administrators. In this way the continuity of the research implementation and development of local curriculum can be maintained.

5. The school administrators should support the community teachers in research and development of local curriculum.

6. The community teachers in all levels and all affiliated offices should develop their abilities in research and development of local curriculum from experiment or actual practice by using the guideline from this research.

7. Efficient application of the CLIPAR has appeared in small groups (3 to 5 persons) whose members have chance to bring what they learned from their own group to be exchanged in the bigger group seminar to keep the diversity in learning exchange.

8. Application of the CLIPAR in the development of abilities in research and development of local curriculum among the community teachers is preferably done with proper adjustment in application timeline.

9. The school administrators should promote the application of developed local curriculum to expand the results in other educational institution in a form of the network of local curriculum practitioners.

### **Suggestions for future research**

Suggestions for future research are related with the issues that should be studied as the followings.

1. There should be studies to produce more guideline to support and encourage the community teachers in the affiliated offices to develop abilities in research and development of local curriculum by using the DAR&DLC by CLIPAR Model.

2. The studies related to the application of the DAR&DLC by CLIPAR Model in the development of abilities in research and development of local curriculum to the community teachers in the affiliated offices in terms of the differences in results and how these differences appear.

3. Future studies should attempt the research synthesis or research integration about development of local curriculum to create knowledge on many aspects of local curriculum systematically through the constructionism theory learning process integrated with the participatory action research (CLIPAR) as a research methodology with Meta Analysis Method.

4. Future study can select an issue whether or not the CLIPAR can be used in developing the community teachers or other personnel to have abilities to work as learning facilitators as well as other abilities and how this achievement can be possible.

5. There should be a study to check whether or not the application of the CLIPAR can be used in the development of learning process to the learners are all levels in all of learning contents or not, and how this feat can be accomplished?

6. Future study may test the efficacy of the CLIPAR to develop the administrators who also have abilities to perform as the learning facilitators. And how this advantage can be achieved?

7. There should be a study to reveal the presumed differences between the results of implementation when the Learning Facilitator, Administrator, and Researcher are the same person and the results of implementation when these are different persons. How these differences affect the development of abilities in research and development of local curriculum among the community teachers?

8. Future study can test the applicability of the CLIPAR to create the awareness on the environment among the learners and to measure theoretical different results of the A-I-C and the Future Search Conference methods. Future study can reveal which method that can produce positive results in which situation.

9. A study can measure the efficiency level of applied DAR&DLC by CLIPAR Model to create the awareness on the environment along with proper research and development of local curriculum on environment.

10. There should be a study to create tools used for qualitative data collection from the samples that have diversities on culture in order to analyze the results from the qualitative data correlated to the constructionism theory learning process.

11. Study can measure the differences between the results of experiment that applies the evaluation methods of the continuous development and the one using the post-assessment method only (after the development process).

12. Future study can apply the CLIPAR as a research methodology and development of a life-long learning centre that emphasizes on using the community-based knowledge from the local wisdom practitioners who come to assist the research and development of local curriculum.

13. Future study may attempt an integration of the guidelines of the knowledge of the local wisdom practitioners and the modern wisdom practitioners to see how these kinds of knowledge mix together. The results of such study may help the preservation of the identity of the local wisdom practitioners who can apply the knowledge at present.

14. The development process would allow the administrators without proper knowledge and understanding about the importance of doing research and development of local curriculum to create understanding, awareness and full support to the community teachers in research and development of local curriculum.