## CHAPTER 2
THEORETICAL ORIENTATION AND REVIEW OF THE PAST STUDIES

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CHAPTER 2
THEORETICAL ORIENTATION AND REVIEW OF THE PAST STUDIES

The present chapter concerned to the theoretical orientation and review of the past studies i.e.

- Meaning of training programme
- Significance of personnel development
- The definition of training
- The study on training needs
- The procedure of study on training needs
- Training needs determination
- Training evaluation
- The definition of the programme evaluation
- Programme evaluation features
- Programme evaluation pattern
- Classroom research
- Objectives of classroom research
- Classroom research process
- Limitation of classroom research
- Problem analysis for classroom research
- The classroom research values and the importance of classroom research
- The administrator's role on the classroom research
- Review of related researches
  - The research related to the training
  - The research study related to the classroom research done in Thailand
  - The research study related to the classroom research done in foreign country
2.1 MEANING OF TRAINING PROGRAMME

Training programme denotes that the activity format devised to induce an individual amelioration pertaining to the knowledge, the ability, the skill, and the attitude lending to a more effective performance, (Thira Prawalpruek, 1995:2).1

Training refers to the personnel development promotion format, which divided into two main features:

1) Training programme for Qualification Augmentation refers to the support for furthering the education. This feature of promotion is practiced pervasively in the officialdom and in government enterprises, to generate human resources in accordance with the personnel development plan. While the support for furthering the education in business sector is exclusive for large business organizations, because this kind of supporting format needs a lot of fund.

2) Training programme for Competencies Augmentation refers to the training through various techniques, such as the field training, the actual practice courses, and through the compact curriculum courses. This feature of promotion format needs a short period of time, while the personnel can be developed to the required specific endowment. Hence the knowledge, skill, and good attitude of the personnel would be reinforced to a better working efficiency. The endowment augmentation promotion format is prevalent in the officialdom, the government enterprise, and the business sector, because of its capacity in the prompt production of actual working personnel, taking less time with better worthiness for the investment.

Then, the training programme is vital to the operational efficiency. Most technicians and educators gave a definition to the term personnel development training in many concepts.

Noppong Boonjitradul (1986)2 stated that “the personnel development” refers to the promotional process in enhancing the knowledge for the actual operators, so that their dexterity and competency would be escalated to a higher efficiency.

Nongyao Tharasisutti. (1986: 36)3 gave a connotation for the personnel development that it refers to the reinforcement process for individual knowledge, adroitness, and ability, through the training, the educating, and so on.
Samarn Rangsiyongrit (1987:25) remarked that “the personnel development” denotes the operation pertaining to the impetus for the individual knowledge, competence, and skill in the betterment of performance, as well as the good operational attitude lending to a more effective performance. In other words, the personnel development is the amelioration and the reinforcement process for operators in various phases, such as the knowledge, the ability, the trait, the attitude, and the performing mode lending to the more effective operation.

According to Harbison and Myers (1964:17), the personnel development denotation is that “the personnel development refers to the elevation process for the knowledge, skill and capacity of the entire member of a community.”

Castetter (1976:28) referred to the personnel development in the educational coterie that it refers to the various preparations by the school system to improve the personnel performance, right from the initial state of employment to the retirement.

This can be abridged that the personnel development refers to the education, the training as well as the various activities in enhancing the knowledge, the capacity, the dexterity, and the aptitude for the personnel. Personnel development intended to develop the personnel potentiality in the unit, for betterment in their accountable duties, with a consideration to the knowledge, the capacity, the skill, and the experience. Moreover, the personnel development is also intended to develop the operational standpoint to the melioration.

The personnel development promotion format, herein, refers to the teachers development promotion format through the capacity increment. These are the training through the training technique, for the teachers to enhance their knowledge, ability, with new ideas, as well as the operational skill, including the attitude and the behavioural changes of teachers in generating the classroom research to develop the learning and the teaching.

2.2 SIGNIFICANCE OF PERSONNEL DEVELOPMENT

The significance of the personnel development can be concluded in six aspects, i.e. (Sukhothai Thammathirat Open University, 1989:13)

1) The personnel development enables the melioration of the performance capacity, supported by the better coordination. Whereby, the personnel development would accelerate the performance interest of the personnel to be accountable in their duties to the meliorated
efficaciousness. Moreover, the acquired knowledge from the personnel development programme should be further applied; hence enabling the amendment and adaptation in one's own performance to the mellorated effectiveness. Consequently, these factors would be felicitous to the successfulness and opulence.

2) The personnel development is a method for economizing, with a decrease of material wasting in the operational application. This is on the account that after an individual has been well trained and developed, he would be able to reduce expenses in purchasing various materials and instruments.

3) The personnel development can decrease the learning period, especially for initiatory employees and incumbents. This can also decrease defects that may arise from the trial and error performance.

4) The personnel development can mitigate the incumbency of superiors, as well as overseers of units in answering questions and in giving advice to their subordinates. In this case, generally, new employees or incumbents would not be able to understand much of the character in the new work. Therefore, in the commencement of the work, they tend make inquiries and seek for recommendations from their overseer or other reliable persons. This is onerous to overseers to answer questions and to give recommendations all the time. Therefore, should those people participated in the personnel development programme, they would attain the knowledge and understanding about the character of the work to be absorbed, right from start, without the need to ask for advice all the time. Hence, supervisors and overseers will bear less tasks in answering questions and in giving recommendations. Whereby, they can give full dedication to their accountable duties.

5) The personnel development is a mode in stimulating personnel in performing their work for the progression of their positions and their work. Generally, in the consideration of promotions for an organization, the qualification and the competency of the individual are taken into the account in assuring that he would be able to cope with the promoted position. Whereby, developed persons would have better opportunity than people who have not yet been developed.

6) The personnel development also assists the individuals in the opportunity to acquire the knowledge, and new ideas. This enables individuals to keep in pace with the technological progression, especially in the administrative knowledge, and the office equipment with
innovation and introductions all the time. The genuine knowledge and understanding would lend to the application and the implementation into one's function. Consequently, this would be advantageous to the organization.

In the tutorial personnel development, absorbing an important role in schools, the development is on the educational factors, such as the learning and teaching development. Therefore, the character of the personnel development method attains a different activity from other units or government organizations. Whereby, technicians and educators gave their opinions as follows:

Nopamas Wongspa (1981:74) propounded that the personnel development attain a characteristic meaning, because the educational administration aims for the quality development of human resources to coexist proficiently in the community. The persons to develop others in the education coterie are 'teachers', who are performing their educational duty within schools. Therefore, the crucial consideration in the school personnel development is the aim of the particular unit or school.

Ekchai Guisukpan (1985:253) referred to the personnel development that this is the various executions to assist in developing the knowledge, the competency, and the dexterity of the personnel in the units, to the betterment in their working endowment. As for school personnel, especially teachers who are accountable in purveying knowledge for students, after a long period of service, should be developed to the accrual of new knowledge, competency, as well as various techniques that would be felicitous to the teaching work.

Guff (1975:42) imparted that the tutorial personnel development aiming on teachers, is the individual development in their knowledge, dexterity, cognition, and various learning-teaching techniques. This includes their relationship with students and colleagues.

Mullaley and Daffy (1978:33-34) are in coherence with Guff that the tutorial personnel development is the progression development process in the teaching profession, including the teaching and learning improvement. This connotes that the tutorial development would be propitious for the potentiality development as teachers, resulting from the learning and teaching improvement.
The Office of the National Primary Education Commission (ONPEC) (1988: 18-19) concluded about the personnel development within primary schools that it refers to the execution for the competency of the unit personnel in managing their assigned tasks and in augmenting their endowment. Whereby, in the personnel development, there are two objectives, i.e. for the suitability of the person to the work; and for the proficiency and the competency increment in their performance. There may be the proceeding on the development of knowledge, dexterity, as well as the development on other facets in the personnel development. This may be a unilateral or a multilateral development, depending upon the specific problem and needs for the personnel development of the particular unit.

From the above concept of the educators and technicians, it can be concluded that the personnel development is the promoting process for teachers to upgrade their knowledge, skill and adroitness, with formality. This includes the habit development, the favorable operational attitude, as well as the good morale and spirit, engendering the propitious operational capacity that is advantageous to the functional operation. This is directly effective to the efficacy and the proficiency of the school operation, and to the national development as well. Therefore, the tutorial personnel development is most important and vital, inducing various activities in motivating the personnel developments for 'teachers' to the school benefit in the teaching.

For the aforementioned personnel development promotion activity, it is apparent that the training is another pattern of personnel development promotion with the capacity to lend the personnel in engendering their knowledge, ability, skill and good attitude that is advantageous in augmenting the working efficiency. The definition for the term 'training' has been given in many trends.

2.3 THE DEFINITION OF TRAINING

Pinyo Sathorn (1974:41) stated that the training is one type of activity for trainees are to attend the morning discourse and to enter the training again in the afternoon to pursue the theory of the morning lecture. Therefore, the afternoon period is to practice the acquired theory.

Panas Hannakin (1981:47) stated that the training refers to the meeting and the debate to find solutions to problems.
Rengrak Rojanapan (1986:65) cited that the training is the activity for trainee to acquire the theoretical and the practical knowledge. The trainee will acquire the authentic knowledge and skill. The objective of training is as follows:

1) To develop trainees to the operational knowledge and skill.
2) To designate the operational procedure.
3) To solve the working problems.
4) To quest for the performance development procedure.

The training is divided into three stages:

Stage One: Pre-training: This is the stage of planning to select and designate trainees; the theoretical and the practical curriculum is to be stipulated; the target group to get the training is to be fixed; the training supporting papers and documents are to be prepared, inclusive of lecturing in being and substances for the Resource Persons. Whereby, prominent points are to be detected for guiding sub-groups of the training.

Stage Two: Ongoing training: In this stage there will be academic lectures and discussions by Resource Persons, so that trainees would understand the way to consider problems, and to solve problems, that is feasible to their actual work, and this idea would also be used for exercising the sub-groups. After that would be the sub-group operation, where members would join up to give their opinions and start the practice. This stage would be to apply the acquired knowledge to the practical work with a report on the performance to be presented to the general meeting.

Stage Three: Post-training: This is the evaluation to probe the extent that training trainees applied the acquired knowledge and experience to their actual functions, as well as the outcome to be used for improvement in future training.

Boonlert Pairin (1987:139) stated that the training is a format of training to assist trainees in the effective acquirement of the knowledge according to the aim of the particular training. The training would emphasize on the trainees' formative application of the acquired knowledge to their actual functions. Hence, the training is a concentrated training on the knowledge, the understanding, and the skill in the practical performance, with an objective to train participants in achieving the adroitness in their actual
performance, and to be capable of designing their own working procedure, conspicuously. They are to be capable of solving all the working problems, with an ability to seek ways and means in ameliorating the work to even better proficiency.

Thira Prawalpruek (1995:128) suggested that the training is a pattern of training favoring trainees in the learning theoretically and practically, with an ability to apply the acquired knowledge from the training to the actual operation. The character of the training is divided into two parts. The first part is the conferring of knowledge by Resource Persons to augment the cognition of trainees in amending the working problems, and in designating the procedure for the operation and the improvement. The second part is set for the actual performance of the trainees, where they can debate or discuss and give their own path in the problem solving and in the working procedure. In this case, the performance may be operated in mass or in minor groups. However, the performance in the second part must implement the principle lectured by Resource Persons in the operational procedure.

The training stage was proceeded in the following sequence:

1) The operational procedure of the particular training must be clearly explained to the trainee.
2) To purvey for Resource Persons in giving lectures, reinforcing the knowledge propounded in this training, including the sub-meeting procedure.
3) To exercise sub-groups for the execution of the assigned operation.
4) To present the performance result to the general meeting, for approval as operational procedure or in solving the working problems.
5) The training participants are to amend conditions acquired from the training to the operational feasibility and proficiency.
6) To make a summary on the training for a mutual understanding.

The training technique is suitable for the operational procedure manipulation to enhance the operational proficiency. The training is distinctively divided into two parts, i.e. the practice and the theory. The attainment from the training can be directly applied to the actual work of trainees.
Merits of the Training

1) The training promotes the participation of every trainee.
2) Trainees are rendered the opportunity to think and to practice.
3) Trainees are able to apply the training attainment to the actual operation and performance in their units.

The constraint of the training is the need for many resource persons who are responsible for the lecturing and for supervising sub-groups. Moreover, the group operation needs a certain period of time.

Somkid Bangmo (1996:89) cited that the training is for trainees to attain the practical performance. Generally, there would be a lecture on the basic knowledge, before the actual practice. The training enables the ardency of trainees, and they would acquire a way in applying the training acquisition to the actual operation.

2.4 THE STUDY ON TRAINING NEEDS

Remgrag Rojanapan (1986:16-17) stated that 'the study on training needs' refers to the status of problems in the unit that need a rectification through the training. This can be classified as follows:

Category 1: The training need of explicitness.
Category 2: The training need to be searched.
Category 3: The training need with an emphasizing on the learning, the empirical, the attitude, and the individual performance procedure.
Category 4: The training need of the organization training, when the operational proficiency of the particular organization proved to be declining and the particular problem need a rectification through training
Category 5: The training need for the current operation to solve confronting problems, so that the execution in the stipulated standard can be implemented
Category 6: The training needs that are the current imperative requirement to achieve the future objective or to prevent future problems.

Somkid Bangmo (1998:41) stated that 'the study on training needs' refers to the detection of problems or conditions pertaining to individuals in an organization, which can be
amended through the training, so that the organization could progress smoothly to its goal. The training needs can be classified as follows:

Category One: The training need of explicitness occurs: when the personnel has been recruited; when there are transpositions; when there are changes in the operational procedure.

Category Two: The training need to be searched occurs: when the production decreases; when overhead costs increases; when the working operation is inexpedient; when the proficiency declines.

2.5 THE PROCEDURE OF STUDY ON TRAINING NEEDS

The study on training needs is the preliminary stage of the training, with a procedure through various aspects of analysis as follows, (Kanchana Watthayu, 2001:24)²¹

1) To analyze the working process and activities.
2) To analyze the working procedure and knowledge.
3) To analyze the regular working problems.
4) To analyze the working behaviour of the personnel.
5) To analyze the structural and the behavioural structure of the organization personnel.
6) To analyze the performance appraisal of the personnel in the unit.

The pattern of analysis for training needs can be diversified as follows:

Pattern 1: The training specialist is to study the actual circumstance of the unit to attain the actual data of the condition, and problems to be rectified through the training. The outcome of this analysis is used to the designate the training caption.

Pattern 2: Administrators acknowledge and realize the operational problems, or any indication that the particular organization needs a personnel development. Then, they are to execute the data survey to discover training needs, through the personnel of their own unit. Whence, the rectifying operation on problems can be feasibly performed.

Pattern 3: This is to discover the future necessity. In the light of the organization policy or objective changes with direct impact to the future organization procedure and work planning, there is a need of adaptation for self-improvement to the modernization and the sustenance of the organization in the changing circumstances, economically, socially, and culturally. In this pattern, administrators and training specialists are to cooperate in studying and analyzing, right
from the initial stage to the end of the process to accomplish the execution in accordance with the changed objective.

The method of data assemblage to discover training needs can be done in two aspects, i.e. the assemblage through data sources, and the assemblage through implementations, (Kanchana Watthayu, 2001:45)

1) Assemblage through Data Sources: This is the method in attaining data through various evident and documents of the organization. This is pertaining to the policy, the objective, the goal, the work planning, and the operational outcome of the organization. Moreover, the data can be gathered from the knowledge, the endowment, and the attitude of the personnel in their operation. This is inclusive of the circumstance, the changes and the progression in the economy, the social, the politics, and the technologies, giving an impact to the organization.

2) Assemblage through Implementations: In this method, the searcher for data must contrive their own implementation, such as the survey form, the interrogation form, the observation form, the operation evaluation form, the operation follow-up form, the personnel multi-facets attitude measurement form, etc. Such data assemblage through implementations needs the gathered data for statistical analysis, such as the mean, the standard deviation, the t-test, the F-test, according to the suitability.

2.6 TRAINING NEEDS DETERMINATION

After the data has been collected, no matter from data sources or from the assemblage through implementations, the outcome can be determined for training needs, such as:

1) Training needs for knowledge (inserted substances for the training curriculum).
2) Training activities arrangement.
3) Resource Persons to give training.
4) Training media.
5) Training place.

In this research, the researcher studied on the training needs through the training pattern according to the above theory, starting from the survey on the individual need for the training, with an emphasis on the individual requirements, knowledge, experience, attitude, operational procedure, as well as the organization training needs. This is done with a
consideration on problems that decreased the organization proficiency, and problems to be rectified by the training. As an administrator, the researcher perceived and acknowledged that there are problems in the working performance, i.e. teachers face a lack of knowledge and ability in the classroom research, including the application of the outcome in the development of the teaching - learning quality. Hence, data have been assembled through the survey implementation on the training needs, with a caption of 'the classroom research, and the outcome application for the teaching - learning quality development'. This survey form is composed of following details:

1) Training needs for knowledge acquisition (inserted substances for the training curriculum).
2) Training activity arrangement
3) Resource Persons
4) Training media
5) Training place.

The collected information in this place has been analyzed through the following means:

1) Means
2) Standard Deviation
3) Comparison on differences of requirement on training needs of teachers, according to following variables, such as gender, age, and teaching empirical, through t-test, and F-test.

2.7 TRAINING EVALUATION

The training evaluation is the process to obtain the operational result according to the training programme. The evaluation is placed on the level of training success in comparison to the stipulated aim and objective. The training is a pattern of training, therefore in the training evaluation, the pattern of evaluation for the training is the same as the training evaluation.

Matters that should be evaluated after the training or the training completion, are divided into two types.

1) Attainment of Trainees:

These are knowledge, skill, attitude, and functional behaviour changes.
2) Training Occurrence:

These are the input, the training process, the output, and the impact.

EVALUATIVE TRAINING PRINCIPLE

The evaluative training principle that should be considered is as follows:

1) The training achievement evaluation should be executed through the comparison of the training outcome to the training objective. This is to find out the behavioural quality of trainees comparing to the stipulated objective. This finding includes the depth and the reason of changes in the knowledge, the ability, the skill, and the attitude of trainees.

2) The training process evaluation is for example, the level of appropriation in the arrangement of training activities/empirical; the level of entertaining in the resource persons' knowledge transference technique; the efficiency in the implementation of media instruments and facilitators for the training.

3) The suitability of the training period.

4) The level of favorableness in the training place to the learning.

The data assembling method for the training evaluation can be discriminated in two aspects, i.e. trainees' achievement evaluation; and trainees' opinion evaluation, (Kanchana Watthayu, 2001:323).

1) Training Achievement Evaluation

The training achievement evaluation can be executed through the pretest. This is the evaluation on trainees' basis of knowledge and skill through the test implementation or the self-evaluation form. The outcome would be taken to calculate the means and the standard deviation, in order to check the average means and the record dispersion. This would enable the cognition of the trainees' basic knowledge and ability.

2) Ongoing training evaluation

This is the performance evaluation pursuing the exercises or work papers assigned by resource persons during the training. This manner of evaluation enables trainees to perceive the operational result amid the training. Should any flaw occurs, the resource persons are there to give helpful advice, for amendment and for the good understanding. Moreover, it would be an incentive for trainees to be zealous all the time.
3) Posttest Evaluation

This is an evaluation after the training is over, applying the evaluative implementation and analysis, just like the pretest evaluation. The outcome of the posttest evaluation will be compared with that of the pretest evaluation. Should the achievement of the posttest evaluation be higher than that of the pretest according to the implicit statistic analysis, it proves that the training can effectively increase the achievement of trainees.

4) Comparative Evaluation on Knowledge Criteria, or Performance Criteria

The comparative evaluation on the knowledge criteria or the performance criteria is to find out the extent of knowledge and capacity of trainees who completed their training. Should it be in accordance with the specifications then the training is considered as effective.

5) Trainees Opinion Evaluation

The evaluation on trainees’ opinion will be executed after the training completion, and the evaluation will be done only on trainees of the specific training. The utilized evaluation implementation is the Opinion Evaluation Form or inquiries on the opinion of trainees about the training. The acquired information will be analyzed on the means, and on the standard deviation to find out the trainees’ level of opinion. This evaluation schedule has the same format as the Programme Evaluation. To enable the understanding in this manner of evaluation, the researcher further propounds the programme evaluation quintessence.

The programme evaluation is a significant device that is beneficial in answering questions on the programme proficiency and efficacy. It also assists in the discrimination and the determination of how the programme should be redressed, including whether the programme should be extended, and if so, how.

2.8 THE DEFINITION OF THE PROGRAMME EVALUATION

The term evaluation refers to the attainment process for data in determining the level of conformity in the actual results to the expected results of the performance. The objective is to know the success and the failure, including the cause of the success or failure in the particular performance (Somwang Pitiyanuwat. (1981: 63)²⁴; Somporn Saengchai. (1977: 3)²⁶; cited in Suchman. (1969: 29)²⁶; Weiss. (1972:107)²⁷; Alkin.(1999:44)²⁸. While the term programme refers to the system of activity or performance planning on the resource utility and the procedure, to attain the effective achievement in accordance with the objective within the designated
period and existing preliminary factors, (Prasit Tongyingsiri. (1981: 16); Natapol Khantachai. (1982: 8)). When the terms 'evaluation' and 'programme' are combined as 'programme evaluation' it denotes the data assembling process from the performance in accordance with the programme, to attain an inference on the level of achievement according to the designated objective, including the causes, as well as the action to take on the programme amelioration.

Wirat Sookying (1990: 11-12) imparted that the programme evaluation is the analysis on various programme activities, considering the effects and the impacts to the programme, for the use of comparison with the intended outcome, or to propose procedures in solving various problems in the programme. The programme evaluation can be executed with the ongoing programme and the completed programme.

Seni Pitak-anop (1999: 23) referred to the programme evaluation that it is the process for collecting data and information, as well as various activities of the programme to present an analysis and capitulation to administrators. In this case the distinguisher has to choose the most suitable option for the situation. All in all, the programme evaluation is for the decisive planning on the programme development appropriateness, keeping in consideration of the aim and objective for the performance, and to perceive the extent of achievement to the aim or the occurred hindrances.

Nisa Xuto (1995: 8) gave a definition to the term 'programme evaluation' that it refers to the scientific process, or the socialistic science research technique to find reliable and factual data pertaining to the programme, to determine on the programme feasibility.

2.9 PROGRAMME EVALUATION FEATURES

1) The programme evaluation process is more prominent than just being a procedure. The present feature and extent of the programme is capacious. Therefore the programme evaluation has to be done in two features. The first feature is the process of determination on programme values, utilizing standard or the comparison criteria on the programme outcome to attain an inference on the programme outcome lending to the future operation determination. The second feature is the data collection process to support the programme decision. The collected data is composed of the programme performance data for a comparison to the
criteria, as well as the data on the performance outcome through the option, including the
data to assist the determination on choosing those options.

2) The programme evaluation is to test the achievement level of the particular
programme in the stipulated objective. This includes the evaluation on impact from the
programme.

3) The programme evaluation in the Formative Evaluation and the Summative Evaluation
to find various data to develop and meliorate the programme performance. This includes the
defective finding to attain the way of modification on the context factor and the procedure that is
propitious to the programme proficiency upon the programme completion.

4) The programme evaluation is the evaluation on various components, emphasizing on
the result of personal changes, including other constituents, such as the learning - teaching
evaluation which is a part of the programme evaluation.

5) The programme evaluation is the searching process for the specific answer of a
programme, without the purposing on the search for theories or criteria in referencing and
deducing, but this is the data collection for the use in the particular programme only.

6) The programme evaluation is the important instrument in the administration, with an
important role in managing various programme performance, because the benefit of the
programme evaluation is numerous, such as the data preparation to assist in choosing the
alternative performance; the performance melioration implement to the proficiency; providing
the decisive data in choosing the means of programme execution.

7) The programme evaluation is the implicative activity to the programme performer. The
evaluation for the programme modification must be done by responsible persons who are active
in the particular programme. Moreover, the evaluation for the programme determination, needs
evaluation criteria; and persons to set up criteria are the implicative and active persons to the
programme. All in all, the present role of the programme evaluation is the accountability of the
programme performance committee. Whereby, extrinsic evaluators take over the status of
programme councilors.

The North Central Association of U.S.A. (1976:7)\textsuperscript{34} stated that the programme evaluation
is composed of four stages in the basic process.

1) To perceive the programme objective pertaining to its desirable condition.
2) To measure the performance result and to collect data for the actual circumstantial feature.

3) The data comparison from the performance and the desirable condition, to contemplate on the nonconformity that may occur, and to observe causes of such nonconformity.

4) The determination on the comparison results to perceive the outcome of any part of the operational programme that should be modified, and the way of modification. This include the overview decision, as to the programme extension or desistance.

Schwab (cited from Nisa Xuto. (1995:37 - 40)) stated that the programme evaluation should be a package activity, where the evaluation should not be done upon the programme completion only, but should be done incessantly. The programme evaluation should be an integrated activity in three features.

1) The Programme Scheme and Analysis Evaluation, or the Pretest Evaluation or the Intrinsic Evaluation is the Programme Initiative Evaluation, through the study on the programme intention to find the probable outcome of the schematic pursuance. The character of the evaluative data in this stage is still not authentic, and it is still the probable expectancy.

2) The Ongoing Programme Evaluation or the evaluation during the programme execution to see if the programme proceeds correctly and completely in the imposed period, including the extent of the effectiveness. This period of evaluation is the Process Evaluation, where most programme evaluators in this period partake in the programme operating unit. They are quite acquainted with the unit performance and working system. Persons receive the evaluation report are programme administrators, the executives committee, and the programme preparation unit, and so on. The programme evaluation activity in the execution period is relevant to the progressive evaluation or the Formative Evaluation. This is in consorting with the concept of Scriven (1963: 60 – 75). The advantage of this evaluation is for the programme amelioration amid the ongoing programme.

3) The Post Evaluation is the evaluation after the programme completion indicating the result measurement on the programme accomplishment of the stipulated level, and to observe any apparent problem impeding the expected accomplishment of the programme. This evaluation is to collect results of the evaluation from the initiative stage of the programme. This
is the collection of the entire programme analytic results, including recommendations for the programme. This post evaluation is relevant to the capitulatory evaluation or the Summative Evaluation, and is in congruent with the concept of Scriven (1963:60 – 75). This is the programme evaluation after the programme completion, for the benefit of the study on the programme values, and to consider the application of the programme merits to other circumstances.

2.10 PROGRAMME EVALUATION PATTERN


1) System Analysis Approach

The system analysis approach is the application of the system analysis to the management planning technique to be in congruent with the Planning Programming and Budgeting System (PPBS). The evaluation format is the study on the programme outcome and to answer questions on the rationale relationship to the programme achievement pertaining to the programme operation factor and the programme operating process, through comparison on the programme accomplishment vs. the programme expenses. This comparison is to find out the effectiveness in the utilization of resources.

2) Goal-based Approach

This is the programme evaluation in the Goal-based Approach giving a Significant to the programme object as the evaluation criterion on the programme evaluation, and being the study on the comparison of the outcome between the actual practical performance of the programme to the programme intentions.

3) Goal Free Approach

The Goal Free Approach is a valuation with an aim to apply the data for the Description and the Judgment. These are three types of data, such as the Antecedents, the
Transactions, and the Outcomes. In the data collection, evaluators must record these three data into four categories, such as the Intention, the Actual Outcome, the Standards, and the Judgments. In the initial stage of the evaluation, evaluators have to consider the data for the purpose of the Description. In this case, a study must be made on the consortium between the intended outcome and the actual outcome, including the association between the primary factors, the process, and the output. The result is used for a comparison on the stipulated standard and the speculated standard, before making any decisions.

4) Decision-making Approach

The decision-making approach is the programme evaluation with an adherence on the decision-making, giving significance to the evaluation user who is administrators or the decision makers. This evaluation is executed through the adherence on three decisions:

4.1) Stufflebeam (1968:128 – 150)\textsuperscript{15} proposed an evaluation pattern to attain the data lending to the said decision-making, which is called the CIPP Model (Context, Input, Process, and Product Model), with an indication that the programme evaluation has to be comprised of four facets:

4.1.1) Context Evaluation: This is the evaluation on the circumstance and the requirement for programme changes. The evaluative result lends to the decision making pertaining to the operation planning, and the policy planning to be in congruent with the circumstances and other requirements.

4.1.2) Input Evaluation: This is the evaluation on resources inducing changes or operational methods to be applied for the accomplishment of the required objective. These resources are the manpower, the budget, the materials, the physical plants, trainees, and resource persons. This part of evaluation is for the use on the determination whether the preliminary factors of the training is sufficient and suitable for the accomplishment of the programme in accordance with the stipulated objective.

4.1.3) Process Evaluation: This is an evaluation on the programme operation procedure, to see if it is accordance with the stipulation. This is also to check the training efficiency, and the occurring problems that may arise. Moreover, this also acts as the operational control, which is advantageous on the decision making for the future performance, or for the amendment on defects.
4.1.4) Product Evaluation: This is the evaluation on the outcome from the programme pertaining to the improved level on the knowledge, skill, attitude or behavioural changes of trainees, to see if these are in accordance with the training objective. This part of evaluation lends in the decision-making pertaining to the defects of the planning, and to the programme management, as to what should be improved and amended. After the amendment has been made, this process has to be repeated. This concept of evaluation has to be done consecutively to attain the congruity. Whereby, the evaluator must propose many options for the convenience of the decision maker.

4.2) Alkin (1999:52) propounded an evaluative pattern adverting to the CSE Model, which is comprised of five stages:

4.2.1) Necessity Inspection: This is an attempt to study problems of the programme through the consideration on differences between the intended occurrence and the actual situation. Should the difference be too broad, it is an indication that the training necessity is high? Adversely, should the necessity be scarce, or should actual practice be approximate to the intended point of the programme, (the intended occurrence), then the decision in this stage is the Problem Selection.

4.2.2) Planning Evaluation: This is the collection of data to solve problems found in the stage of the necessity inspection. This stage of decision makes stresses on the Programme Selection.

4.2.3) Schematic Application: This evaluation concentrates on the efficacy in the schematic application of planning stage. This stage is similar to the CIPP, where the decision-making in this stage is for the Programme Modification.

4.2.4) Progress Evaluation: This stage aims on the study of achievements in various parts of the programme, and to observe if it directs to the problem solving. In this case, the aims for various plans are utilized as the decision-making criterion for the evaluation. The character in this stage is similar to the Schematic Application Stage, in the aim for the Programme Modification.

4.2.5) Product Evaluation: The character in this stage is similar to other models of the product evaluation, i.e. to consider if the programme is capable in solving problems found in the stage of necessity inspection for the level of requirement. The evaluator
has to render the data to the decision maker for a consideration of what should be modified, maintained, proliferated, or what should be done to the programme. The decision-making in this stage is the Programme Certification or Adoption.

4.3) Prawat Vonglavan. (2000:141) adverted a method on the evaluation, adhering to the decision-making, through a search for a non-conformity between the desiderata and the actual programme execution in the stages of Programme Designing, Readiness Preparation, Execution, Output Inspection, and in the stage of Investment Analysis. The evaluation according to this model needs a programme expectancy standard. After that, all evaluations must proceed with an aim for new data, and the decision making is to be done through application of the stipulated standard criteria. This pattern lends to a consecutive feedback in every stage of the evaluation, throughout the programme. In each stage of evaluation, should any flaw be detected then an amendment will be done on spot in the particular stage through the Problem Solving, comprised of the interrogation to attain of answer of how the particular defect occurs, including its causes, and what should be the means to amend the defects of the particular cause. After the evaluator evaluated to the fifth stage, should the execution continue or there be a commencement on a new cyclic, then a new design had to be devised, through a modification that is in congruent with the investment analysis, and based on the ground of preliminary factors.

5) Professional Review Approach

The programme evaluation in the Professional Review Approach, is to inspect the training programme to perceive the standard quality and capacity of qualified trainees in the possibility of joining the professional group. The aim of the evaluative principle is the vocation accreditation. Whereby, the evaluation process is to be executed through the Internal and External Committee, who are specialists in the particular profession for the quality evaluation, (Nisa Xuto, 1995: 23-24).

6) Case-study Approach

The case study approach is the qualitative evaluation, where Sirichai Kajanawasi (1999:9) averted that such method is the Subjectivism with an emphasis on the Naturalistic Approach, on the principle of the flexible operational procedure, with an assemblage of overall natural data, including a knowledge and skill implementation of as the summarization standard.
An implemented qualitative evaluation method is the case-study where an evaluator must study the entire details of the case-study, and apply many methods in the data collection, especially through the observation, the interview, and in the interrogation. Nisa Xuto (1993:27) concluded that the case-study programme evaluation renders a profound and extensive outcome, inducing a better understanding for the evaluation user than the approximation evaluation.

7) Training Cognition/Outcome Evaluation

A. C. Hamblin. (1998:168) proposed a format in the training cognition evaluation or the outcome evaluation, principally adhering to the level of the training cognition or the occurred outcome. Whereby, the evaluation will be divided into five levels as follows, (Preecha Siwalai. (1982:21-23), Kruawan Limapichart. (1998:149 – 151), and Somkid Bangmo. (1998: 108 – 113):

7.1) Reaction Level: This is to evaluate the reaction of trainees to the trainings, pertaining to the curriculum, the subject content, the resource persons, the place of training, the time of training, the training technique, and the training instruments.

7.2) Learning Level: This is the evaluation on the amount of knowledge acquisition of trainees.

7.3) Performance Behaviour Level: This is the evaluation upon the programme completion to see how trainers change their performance behaviour, such as the change of performance to match the acquired knowledge and competency, the adaptation of the working behaviour to coordinate with the teamwork, and the formation of the good operational culture, etc.

7.4) Organization Changing Level: This is the behaviour changes evaluation on the trainees' performance pertaining to the function and duty in the actual working-unit of trainees. Matters to be evaluated are: the leadership behaviour; the performance quality development; the teamwork morale and spirit encouragement; the good organization atmosphere; the organization behaviour development, and so on.

7.5) Summit Quality Level: This is the evaluation on the acquired quality upon the training completion. This is the changes pertaining to the knowledge, the skill, the attitude; the reduction on the overheard or the operational budget; the working quality augmentation;
the melioration on the working system rearrangement to a better proficiency, etc. The knowledge alternant is the competency in learning, remembering, cognizing, and the knowledge application, as well as the analyzing, the synthesizing, including the value evaluation. The dexterity changes are the betterment in the training capability. The attitude changes associates with the feeling, the belief, the preference, etc.

From the above concept and theory on the programme evaluation, the researcher adapted the programme evaluation theory of A.C. Hamblin. (1998:171) with a proposal on the evaluation programme pattern for the training, adhering to the cognition level or the training outcome. Whereby, the researcher segmented the evaluation into five levels as follows:

1) Reactive Level: This is to evaluate the reaction of trainees to the training. This evaluation includes the class research, pertaining to the conformation between the training curriculum and the National Education Act, 1999, as well as the research matters to be applied in the learning/teaching development.

2) Learning Level: This is the evaluation on trainees to see their level of increased knowledge. This evaluation pertaining to the knowledge and the ability, as well as the opinion and the understanding about the classroom research.

3) Operational Behaviour Level: This evaluation is executed when the programme already completed, to observe the behavioural changes of trainees in their operation, namely, the working changes pursuing the knowledge and ability from the training; the change of behaviour in executing the classroom research; including the change of teaching behaviour, heeding the research outcome in learning-teaching development.

4) Organization Changing Level: This is an evaluation on the behaviour changes on the operation to the function and the tasks of trainees in their practical units. These evaluations are: the leadership behaviour in the classroom research, and the application of the classroom research outcome to the learning/teaching development; the research quality development; the change of knowledge and competence in the system rearrangement for the research for the development of the learning-teaching proficiency; the reinforcement of the good attitude to the classroom research; the engenderment of morale and spirit in forming up the work; the creation of good atmosphere in the organization; and the application of the acquired knowledge and competency from this training to their actual work, keeping in consideration, the
analyzing, the synthesizing, the evaluating, including the ability to purvey the knowledge and to advise others.

5) Summit Value Level: This is the evaluation on the values attained by trainees after the training on the Classroom Research, and the application of the research outcome to the learning/teaching development. These are: changes on knowledge, skill, and attitude, pertaining to the classroom research, the learning increment on the competency, the memorization, and the understanding. This evaluation includes the application of knowledge to the learning- teaching development; the ability in analyzing, synthesizing, and evaluating values. There are also observations on changes in the operation skill, as well as changes on the attitude, the feeling, the belief, and the preference in the application of the research outcome to the learning of students.

2.11 CLASSROOM RESEARCH

The denotation of Classroom Research

The classroom research is another education research pattern, where many educators gave a denotation to the classroom research as follows:

Somwang Pitiyanuwat (1981: 32) imparted that the research is the verity questing process through the observation and the deductive rationale or the scientific study. The applied research principle in the education coterie would become the behavioural study to be used in the speculation and in controlling various phenomena under the educational circumstances. The educational research is a systematic search to detect various rules or the general knowledge on the behaviour for the use of speculation and phenomenon control under the educational condition.

Wallop Gunsub (1988: 232) connoted on the educational research that it a quest for verity through the science, with a systematic specification on the objective, the process, and stages, without using the consciousness or the conjecture. Whereby, there must a supporting evidence for the decision-making.

Utumpom Jamommam (1994: 156) gave a definition for the classroom research that it is a quest for answers where teachers are in the educational circumstances to improve the rationale concept and the rectification of their relative conditions. This gives teachers the
understanding in the comportment and practice as well as their related roles. The Teacher Research is to be executed by teachers, of teachers, and for teachers. In this a research the teacher must study to find out the learning-teaching problems. Whereby, the teachers who make a data search to solve problems through reliable process. Therefore, the research outcome would be an answer which the teacher, himself, would apply in solving his own problems.

Wichai Wongyai (1994: 259) stated that the classroom research refers to the quest of a solving method for educational problems from the actual practice. The research can proceed in many levels, such as in the classroom level as well as in the school level. The research working group may include teachers, students, school administrators, parents, and community members.

Suwattana Suwanketnikom (1995: 48) gave a definition to the classroom research that it is a process to quest for factual and reliable knowledge on the Learning-teaching contents to develop the learning of students. In this case, teachers execute the research, while students would become the sample group. The classroom research would lend to the teacher’s the systematic performance, the functional understanding, and the ability to select a judicious and creative method for a qualitative decision-making, with a concrete indicator, and a working contentment. Primarily, this execution would induce the effective learning of students. Teachers can acquire their learning or innovation that is advantageous to the learning and teaching, lending to the self-improvement of teachers.

The classroom research is the research study pertaining to the learning and teaching in the classroom for the quality improvement and development of the learning and teaching, in the wise of the curriculum, the teaching method, the media and the learning/teaching activity arrangement, including the evaluation, for the benefit of the effective development in the learning/teaching, (The Office of the Teachers’ Civil Service Commission, 1997: 77).

Tissana Khaemanee (1997: 85) imparted that the classroom research refers to the research in the context of the classroom with an intention to apply the research outcome to one’s own learning-teaching development. The research process would be used for the development of students’ achievement in academic.
Atchara Sarawasi (1997: 93) stated that the research is the questing process for a reply to the question or problem to be studied through the scientific method, acquiring the factual and exact data.

The Department of General Education (1997: 101) explicated that the classroom research is to be executed by the teacher of the classroom on students to solve learning-teaching problems in the subject under the teacher's responsibility. The evaluation starts from the systematic analysis on problems and end on the contrivance of the problem solving innovation.

Gampol Chai-anand (2000: 96) gave a definition on the classroom research that it is the questing process for the factual and reliable knowledge, pertaining to the development and the learning/teaching administrative development in the classroom context.

Suwimol Wongwanij (2000: 323) stated that the classroom research refers to the research by teachers to solve the classroom problems, and the outcomes of which is to be used for the learning-teaching improvement, to the ultimate advantage of students. Moreover, Classroom Research can be defined into different words:

1) Action Research: This word has been prescribed extensively. At times, a writer may wish to indicate specifically as the 'training'.

2) Classroom Research: This is to emphasize that the place to be researched is the classroom, and it associates with the learning/teaching in the classroom.

3) Teacher Research: This research need an emphasis that the researcher is the teacher, without indicating the place to be researched, gives an implication that the research is to be done in the classroom.

4) Self-reflective Inquiry: This is the quest for knowledge with teachers themselves as the reflectors. The reflection is another important stage of the classroom research.

5) Classroom action research: This indicates clearly that it is the training, and executed in the classroom.

Kanchana Watthayu (2001: 34) stated that the classroom research is the research from the problem circumstance occurred in the classroom pertaining to the learning and teaching. This is the research to apply the research outcome to the learning-teaching development.
This would be a coupling research to the learning and teaching. This means that the research is to be done while teaching. The research is to develop the optional development for the problem solving or the quality development for the learning and teaching by teachers. The option development is the learning and teaching innovation development (teaching procedure and media), the applying of innovation for trial and the application of the outcome is to be analyzed and reported.

M. Jones Cameron (1983: 45) imparted that the classroom research is the problem solving, the developing, and the systematic learning - teaching meliorating, in accordance with the scientific process. This is the execution of teachers who are actually exercising the teaching, with professional perspicaciousness, with discernment in the environmental problems of their own classroom. Professionally, a teacher has to make decisions all the time, both in the learning - teaching process and in the various problems solving, occurring constantly in the classroom. The research would aid teachers in diving to exercise correct and suitable decision making in their own classroom, lending a teacher to construe the research outcome for the practical exercise in the classroom.

In the capitulation, the classroom research is the optional development in the solving of problems or in developing the learning and teaching quality by the teacher of the particular classroom. This optional development is the innovation development in various facets. The outcome of the applied innovation would be analyzed as a means in the learning quality of students to the betterment.

2.12 OBJECTIVES OF CLASSROOM RESEARCH

Michael Bassey (1986: 13) commented that the intentions of the classroom research are as follows:

1) To check the problems and to solve the learning-teaching problems for the improvement of a teacher's performance.

2) This is for teachers to innovate the skill and a new mode of teaching, giving an incentive for teachers to analyze problems. Hence, teachers would develop on their problem solving, the problem discernment, with a confidence in determining on any action of the learning - teaching process that is appropriate to their classrooms.
3) This is to instigate teachers to change their teaching-learning behaviour, impelling a change of requirement for knowledge from various data and information; as well as the instigation on the require for the teaching media innovative development, and so on.

4) The theory would lend to action through teachers, inducing the improvement in the knowledge on the research procedure for teachers.

Arthur W. Foshay (1994:317 – 325) purported the rationale that teachers need to become researchers.

1) School teachers attain special characteristics, impeding the feasibility of research from other sources in modulating the school. The reason is that the research from other sources is not practical for the characteristic of schools, considering the school unreadiness. This causes the inability to determinate variables apparent in other researches for the application to the school variables.

2) Some teachers need to do the problem solving by themselves, through self-learning.

3) Teachers should design their own researches, with actual execution in their own classrooms, to develop their own learning/teaching quality.

Jones M Cameron (1983: 87) adverted that the classroom research is the development on the planning and the curriculum:

1) The exercising teachers are to apply the curriculum in their classroom learning-teaching process. After any problem arises, the problem solving must be done systematically, reflecting the problem in applying the curriculum.

2) The curriculum and the planning development is executed through the cooperation of teachers in distinguishing actual problems while applying the curriculum.

Robin McTragguard (1992: 112) stresses that the classroom research should acquire a character of the coordinative performance and the working group:

1) This is the community performance through the school committee; teachers and parents of students; teachers and the community committee; as well as the school and the community.

2) The cooperation with researchers, to be executed by teachers and researchers; and by the teachers committee and the researchers committee.
2.13 CLASSROOM RESEARCH PROCESS

Louis Cohen and Lawrence Mansion (cited in Wantana Choochui. 1990:77) referred to the classroom research with following stages:

Stage 1: The problem definition and evaluation occurred from teachers' daily performance.

Stage 2: The proposal agreement on the research procedure among the relevant groups, namely, teachers, researchers, counselors, supporters. The intention is to render the explicit programme structure, and the designation of rational component. This prominent stage conduces the success or the failure.

Stage 3: Literature Review: This stage is to review the literature to study the work of others, in designating the objective and processes, as well as the confronting problems.

Stage 4: Objective Designation: This is the designating of hypothesis that can be tested.

Stage 5: To determine the research performing procedure such as the sample group, and the implementation.

Stage 6: To evaluate the research performing procedure chosen in the fifth stage.

Stage 7: To collect and to analyze the data.

Stage 8: To construe the data.

The systematic classroom research (Supervisory Division. 1995) have been proposed in six stages:

1) Problems Indication and Analysis: This is the determined problem to improve the learning and the teaching, and to develop the teaching function.

2) The problem solving procedure: This is to study the procedure, the theory, and new methods in selecting the most suitable procedure. Then to designate the title, the problem introduction, and the required benefit to be developed. Then to render data pertaining to the problem ponderancy, the problem impact, and the problem causes. The reason in selecting the particular problem solving option is also to be indicated.

3) Problem Solving Implementation: This stage is to device an implementation for the development of learning - teaching media innovation.

4) Problem Solving: In this stage the experiment and the integration is executed along with the classroom learning and teaching.
5) Problem Solving Evaluation: The application of the implementation and the evaluation is to be in the conformity with the problem solving objective.

6) Research Report Writing: In the report, there should be recommendations that are relevant to the existing problems, and the language used in reports should be perspicuous and advantageous for the discourse.

In the classroom research of Lewin (cited in Robin McTraggard. 1992), the significant stages are: the problem solving planning, the planning pursuance, the data collection, and the application of gathered data for the planning improvement. The proceedings are as follows:

1) The Planning: In selecting activities to be determined in the plan, those activities must be practical, with circumspect inspection. There must also be an analysis on the condition through the teachers committee. Whereby the performance strategy stipulation has to be in the explicit feasibility and the emphasis is to be mostly on the practical performance.

2) To pursue the planning.

3) The data is to be collected through observation on the procedure of the performance; the influence pertaining other actions; and the outcome of the performance in accordance with the content to be pursued; as well as the outcome of the performance in accordance with the stipulated planning.

4) The evaluation on the sub-group performance is to be used for future planning improvements.

Monnipa Chutibutr (1999: 35) proposed the classroom research process as follows:

1) In the problem stipulation, problems must be analyzed consecutively:

1.1) The problem analysis in the classroom product level refers to the achievement of students, required for the learning/teaching process.

1.2) The problem analysis in the process level refers to the learning-teaching activity component, namely, the problems of teachers, the teaching character, the media, the personnel, and the budget.

2) To indicate the required objective or achievement.

3) The option contrivance is the conceiving of procedures or innovation that is in congruent with the required outcome.

4) The suitable options are to be evaluated from many designated trend of options, and
to be selected in relevance with the actual condition of the school.

6) The innovation development and experiment must be significant and beneficial inducing to the achievement of the intended objective, and must be feasible as a referential model.

Educational Research Division, the Department of Curriculum and Instruction Development (1999) stipulated the significant research periphery in five stages:

1) To study the condition of the problem quantitatively and qualitatively, to find the problematic character that is feasible as the primary data for the education, or as the comparison on the outcome of the education innovation application.

2) The innovation contrivance can be executed in following phases:

   2.1) Structure - component is namely, the innovative manual for teachers; the behaviour measuring media and activities; and the test papers, etc.

   2.2) The innovative character is to indicate the origin of the concept; while the theory of development indicates the innovative character, the media, and the instruments, etc.

   2.2) The application is the teachers training; the measuring on students or the pre-test, post-test of the application for about one semester, etc.

3) The innovative creation or development is to be in accordance with the stipulated innovation in the patternized framework or procedure.

4) To try out the innovation.

5) The evaluation is to be implemented through the data collection with the same technique as the circumstantial study. The data is to be collected periodically during the experiment. After the experimental completion, the assembled data will be studied in comparison with the fundamental data before the innovative application. In the inference and the assertion on the efficiency of the particular innovation, should the experiment or the problem solving be successful, it denotes that the particular innovation is worth-while; and the outcome would be augmented through the propagation and the publication.

Yajai Pongboribon (1994:26) proposed stages for the classroom research as follows:

1) To discriminate and contemplate on the problem to be studied through details of the particular problem occurred in the classroom, to analysis the condition of the problem, such as the problem of the teacher, students, the subject matter, and the environment.
2) To select a problem that is substantial to the research study through the application of the theory in the consideration on the character of the problem. In this case, a hypothesis and the research objective are to be stipulated.

3) To select a research apparatus lending to the problem solution in accordance with the hypothesis. This apparatus is the applicable device for the experiment or the methodical exercise, such as the practicing model. Whereby, the operative data assemblage apparatus is, namely, the test model, and the behavioural observation model, etc.

4) The chronicle occurrence for each researching stage is inclusive of the progression and the obstacles cohering the action research cycle, in congruence with the concept of Kemis and McTaggart. (1999: 29-31) This is the Planing, the Action, the Observation, and the Reflection, as well as the Re-planning. These are to be implemented in the cycle until the acquisitive operational model has been satisfactorily attained, together with the theoretical proposal for further publicity.

Stage 1: Planning: This is the stage of cooperation in assembling the data to detect the problem, or the cooperation in stipulating the relevant conception to the problems with the educational associative persons. Whereby, devices as tables on the problematic condition, or others, may be implemented.

Stage 2: Action: This stage is the activity stipulation derived from the Planning Stage to execute the implementation or the changes in accordance with the objective of each cycle.

Stage 3: Observation: This stage coexists with the Action Process. There may be the application of notations, the documentary analysis, diary recordings, interviewing forms, the videotape recording, or the application of the observation tests.

Stage 4: Reflection: This is the stage of evaluation, inspection, and the procession for applying the feedback to future cyclic planning.

Wirat Wannarat (1994: 48) concluded the classroom research action process in following stages:

1) Problem Designation: Points of the classroom problem will have to be analyzed to observe crucial causes. Then this stage is to designate the point or the matter of the research study.
2) Problem Definition: The perception of the problem cause or origin would lend to the indication of the problem issue and the caption designation. Thence, action must be taken or the cognition to the problematic points, or the matter for the research. This is to be executed through the study of the theoretical documents and related research. After that, the aim of the research study is to be destined, including the hypothesis, the significance of the research study, the periphery of the research study pertaining to the essence, the number of samples, the number of variables, as well as the variable definition regarding the independent variables, and the dependent variables, and also some of the relevant variables.

3) Data Assemblage: This is the stage of the research, where sample groups and the apparatus have to be designated. In this stage, the chosen apparatus has to be checked. Thenceforth, the research model is to be chosen, and to determine whether one sample group would be suffice the trial or should many groups be more suitable; and whether there should by a controlling group for the use of comparison. After the accomplishment in the parts of sample groups and the apparatus, then the trial is to be executed, and the data is to be collected in accordance with the planning or the assigned period.

4) Data Analysis: After the data has been attained from the manipulation or the trial, the data acquired would be analyzed through the statistic value lending in the rendition on the outcome, and the summarization according to the stipulated intention or the hypothesis.

5) Summation and Report: After the attainment of the data analysis, the data as well as the data summation, as apparently detected, along with the discourse and recommendations on the detected item, to be reported in writing in accordance with the stipulated caption and model of each institute.

Chaipot Rakngarm (1995: 88) proposed following stages and process for the classroom research according to the System Approach as follows:

Stage 1: Problem Designation: This is the stage of investigation for problems or requirements, to learn the problematic matter, the problematic scope, including the cause and the consequence of the particular problem. Moreover, a solving method for each cause is to be contrived, as to what would be the prime option, and what would be the method? Generally, for classroom researches, the factors to be considered are students, and the teacher; while the teaching method is in the
Stage 2: Preparation and Planning: After the first stage has been implemented, activities has to be designated to accomplish the objective of the research matter that the teacher is doing. This stage pertains to the time managing, and relevant persons. The teacher may have to do some reading from texts and various reports as a guideline to attain answers in accordance with the objective. Activity in this case is, for example, the stipulation in the teaching method or the innovation, which is in the Programme Instruction shown in the Computer Assisted Instruction (CAI); the preparation for the innovative design, the data collection, and the data analysis. All these are in the stage of the research designing.

The Classroom Research Designing: This is in the research model for an experiment on the proficiency of the designed learning and teaching method or innovation (Tiamjan Panijplinchai. 1997: 73). After the learning and teaching innovation has been determined, the researcher would study on the quality of the designed method or innovation, that has been devised by the teacher. Whereby, the quality investigation would be studied on two features:

1) The consideration on the rational suitability: This would be executed through the cooperation of teachers, supervisors, or specialist on the specific matter in the consideration of the suitability.

2) This is the application of the designed method or innovation in teaching students, such as the use of the test model, the single group trial model, the pretest and the posttest to the trial, and so on.

This model is composed of only one single trial group. However, there will be many repetitive evaluations in the fixed durations, including the pretest, as well as the posttest, enabling the perception on the tendency of the pretest and the posttest, the suitable trial group to function as the control group for the benefit of self-comparison.

Stage 3: Planning Execution: This is the significant core of the classroom research. An execution with only the cognition on the existing problem of the first stage and to desist without any progression, would only be a surveying research or a Descriptive Research. Thereby, upon the cognition of problems, should a planning be well contrived in the Stage 2, with a designation on the objective, and feasible activities, but with no pursuance, then, this
contrivance would only be a proposal. Therefore, this is the stage of planning pursuance in adherence to the preparation in the Stage 2. This stage would enable the teacher to perceive the applicability of the contrived method or innovation, including the extent of the implementation, as well as the course of amendment.

Stage 4: Follow-up, Melioration, Trial: After the execution, there should be a follow-up to consider condition of the impedimental problem, and the method of amendment, allowing the effective execution, lending to the intended learning and teaching improvement. Hence, there would be changes in the classroom atmosphere, namely in the learning enjoyment of students with a significance, including the helpfulness, with increased responsibilities, and consequently, the better achievement. In this stage a simple statistic would be applied to attain a perspicuous development.

Stage 5: Summarization and Report: After the research completion, the product of the practical accomplishment would be brought up in the research report through the System Approach.

Prawit Erawan (1999: 67) inferred that the classroom research is a consecutive and systematic process, starting from a research on problems of the performance status, the planning on the problem solution, and the planning pursuance. Then the performance accomplishment would be reflected for a new cycle. Details of each stage are as follows:

1) Reconnaissance: This is a stage of surveying on the condition of the teacher's performance to perceive the existing problems. Then those problems will be analyzed on their causes, and the feasibility of improvement and amendment on the defective parts. Whereby, the survey can be undertaken on the learning-teaching activities, the behaviour of students, surroundings, and various school contexts. Such survey and problem analysis lends to the conspicuous perception of problems, with an ability to classify the significance of each problem and to designate the research objective.

2) Planning: In this stage the designation for the objective, the procedure, and also the action planning in the problem questing or the innovative development, as well as the amelioration or the adaptation in the problematic performing condition.

3) Action: This is the pursuance on the stipulated planning stages.
4) Reflection: This stage is to observe any occurrence or development or changes to the execute the summarization and the reconditioning or further problem solving.

Kanchana Watthayu (2001:86) stated that the classroom research requires a sequential process, adhering to the scientific principle, with a particularization into consecutive stages for the performance facility. This enables the preplanning of teachers for the operational performance. Stages in the classroom research are as follows:

1) The Survey and the Analysis on the Learning and Teaching Problems

Every subject in the classroom research is to commence with the perspicuous perception on the matter to be researched. This is because the perception to the existing problem would oblige to a need in the melioration or the development, and such need would be stipulated as the research objective. The researcher would obtain a clear observation on problems in the learning - teaching for each subject that is in their responsibilities. Whereby, various defects would be surveyed and problems analyzed are to be executed. In this case, it matters to find the defective points of students as well as the apparent causes. This execution is feasible from the brainstorming, the exercise-book checking, and the examination at the end of each semester, or from the research outcome. Detected defects would be analyzed to scrutinize the causes and the need for problem solutions on the specific point of the particular cause. Then a report would be rendered in the form of the research objective.

The benefit gained by teachers from this first stage of undertaking is that the designation to the learning and teaching problem can be done specifically and conspicuously, enabling a rendition on the depiction of the students' problematic status. Moreover, teachers are also able to write up the research objective.

2) The Study on Relevant Theoretical Concepts

After the research objective has been designated, the relevant theoretical concepts with the researching matter should be observed and studied, to see if any relevant content is available, and also to find out the pertinent facet, as well as the theoretical coherence to the present research. Whereby, an academic consecution would be demonstrated to potentate the progression and the consummation.
The study on the relevant theoretical concepts would assist teachers in following matters:

1) A clearer view on the researching problems;
2) The attainment on the concept of the fundamental knowledge, as well as pertinent theories to variables of study;
3) A perception on the course of problem under the study;
4) The aptitude to elucidate problems, especially on the determination to the research extent, including the explicative ability on variables to be studied;
5) The endowment to set up a hypothesis judiciously;
6) The ability to select the suitable sampling technique;
7) The capability to choose the data assemblage apparatus opportunely;
8) The competence in selecting the data analysis method appropriately.

The advantage acquired by the researcher from the execution in this stage is the problem solution technique cohering to the principle, the theory, or any studied research, lending to the cogency in the teacher's concept.

3) Learning and Teaching Innovation Development

The innovation is a pattern or a method for the problem solving devised by teachers themselves; or teachers may adapt any pattern or method contrived by others that is suitable to their problematic condition required to be amended, namely:

- Compact Lesson felicitous for slow learners;
- Teaching Kit practicable for low-achievement learners;
- Teachers Manual feasible for the problem in the lack of teaching manuals; Etcetera.

The attainment of teachers for from this stage's execution is the innovation that is potential for the problem solving application.

4) Research Designing

The experiment can be done in many modes, depending upon the innovative symbol, the number of trial groups of students, and the number of time in measuring the studying variables. Each model acquires a different undertaking. Therefore, the researcher has to design the research to be in coherent with the objective, as well as the research
hypothesis, keeping in mind the sample group and variables to be measured. Merits attained by the researcher in this stage are the suitable and cogent innovative experimental model, to verify the proficiency of the particular innovation and problem solving practicality.

5) The Apparatus Contrivance and Development for Data Assemblage

In the data assembling for the use of classroom research, the applicable apparatus depends upon the research objective and variables to be measured. Should there be a need to compare the learning achievement; the measuring apparatus would be the test. Should there be a need to compare the concept, then the measuring apparatus would be the conceptual test. Hence the required apparatus depends upon the condition to be measured. There is a variety of measuring apparatus; while each of them is suitable to the specific data. Therefore, there is a need to study each apparatus scrupulously, in the phase of the apparatus determinant, the structural method, and the merits, as well as the constraint, in order to wield in a suitable application.

After the researcher devised a measuring apparatus or adapted an apparatus provided by others, a quality inspection on the particular apparatus must be executed before the actual implementation through a trial with one of the sample groups holding the same attribute as the target demos to be studied. This is to check the quality of the measuring status, such as the validity, and the reliability. The apparent inferior standard quality must be meliorated and developed to the acceptable quality before the actual implementation of the data collection.

6) The Trial, the Collection, the Analysis, and the Research Capitulation

After the researcher contrived an innovation, and the measuring apparatus, the next stage is to try the particular innovation to the sample group. Whereby, the data are to be collected and analyzed in accordance with the designated course.

In order that the trial, the collection, the analysis, and the research capitulation be guided along the right course, there must be a performing calendar showing the timetable and the period of time in each stage of performance.

The acquisition of the researcher in this stage of performance is the performing calendar, the trial on the innovation, the collection of data, and the experimental summation.
7) Research Rendition

The rendition on the research is the final stage of the research. This is a report on the research right from the initial stage through the analysis and the problem survey, the model development, the trial on the model for the problem solution, right through to the product analysis, the summarization, the discourse, and the suggestion. The rendition is tremendously advantageous to the teachers and to others. This is in the light that the report on the research proffers contents and essence on the research study systematically to others for the benefit of augmentation on the study or for references.

The matter conferred to researchers in this stage is a research report that has been constructed formalistically, enabling an inference in the learning and teaching development, as well as in the enhancement of the educational quality development.

2.14 LIMITATION OF CLASSROOM RESEARCH

The classroom research is different from other research in the light of sample and objectives. The classroom research needs only small group of sample, with the main objectives to develop the learning and teaching activities and the learning achievement of students.

The classroom research is the research in the classroom, prepared by teacher with the purpose to solve and to develop the learning - teaching in the subject of responsibility of the teacher. The primary innovation contrivance development in the classroom research extent is to solve problems and to develop a suitable teaching and learning, with following bisection:

1) Inventive learning and teaching media;
2) Instruction technique or the development activities.

2.15 PROBLEM ANALYSIS FOR CLASSROOM RESEARCH

The problem analysis for the use classroom research may implement the problem analysis method in the achievement level, with the intended attribute of learners, or may analyze problems in the learning and teaching activity provision, or the problem analysis may be done in the teaching preparation. Such problem analysis may be executed as follow:

1) Problem in the Achievement Level and the Intended Attribute of Learners

The problem in the achievement level and the intended attribute of learners refers to the occurred ability and attribute of students. The three main example of such intension are
the cognition, the dexterity, and the attitude.

Example of the problem in the achievement level from the learning and teaching:

1.1) Students acquire a low capability in doing their tests (cognition).
1.2) Most students in the classroom attain a low reading speed (skills).
1.3) Students are deficient in practicing a sanitary habit (attitude).
1.4) Students dislike arithmetic (attitude).

2) Problems in the level of learning and teaching activity provision

The problem in the level of learning and teaching activity purveyance refers to the teachers' learning and teaching activities, where the leaning psychology with a variety of instructional technique is being applied. This also refers to the suitable instructional media with consecutive evaluation and measurement. Whereby, the outcome would analyze for the instructional improvement. However, the problematic cause analysis may be applied to detect the origination of problems. These methods would lend to the problem detection, and propitious to the classroom research. For instance, should students dislike the arithmetic, then the cause may be in the level of the "learning and teaching activity", and causes may be:

2.1) This subject is difficult to teach; therefore the teacher appears to be strict with a determination causing a sense of tediousness for students.

2.2) The teacher use too little media, making it inappropriate to the age, the maturity, and the ability of students.

2.3) The teacher would not give an opportunity for students to learn with a touch on the apparatus because of the scarcity. Therefore, students only have the chance to watch their teacher's demonstration.

2.4) The teacher punished students every time they give a wrong answer, with very few admirations when they give correct answers.

2.5) The teacher always give too much homework engendering a boredom for students.

2.6) The teacher missed the pretest for students causing a non-contiguity in the teaching content to students' basic knowledge.

2.7) The teacher did not provide an opportunity for students to have an actual experience; and although students are suppose to exercise the self-learning, but the
emphasis is placed on the single facet for students to memorize whatever the teacher proffers.

3) Problems in the Level of Instructional Preparation

Problems in the level of the instructional preparation refers to the teacher's preparation before the lesson. This is inclusive of the preparation for the instruction planning, the instruction device, including the instruction media which are supplemented with quality and quantity. Whereby, the problem in the preparation level may affect to the problem in the instruction level.

2.16 THE CLASSROOM RESEARCH VALUES AND THE IMPORTANCE OF CLASSROOM RESEARCH

Kanchana Watthayu (2000: 109) inferred that the ability in the classroom research of the teachers is a good image to the educational coterie, in the light that the value or the product of the educational innovation contrivance for the implementation would be advantageous to the educational personnel and units.

1) Students: Students in a classroom hold a different basic knowledge and ability. The fact a teacher tries to analyze on the cause of a problem through the principle, and cogitates on the problem solving to the melioration of students' behaviour, would subserve students' vehement in the knowledge questing and in the learning to the intended achievement at a satisfactory level, with a learning problem obliteration.

2) Teachers: Teachers are to wield a systematic performance, with a planning on the regular work, inclusive of the instruction planning, and a suitable choice on the instructional method. A steady evaluation on the outcome with clear objective enables the cognition on the performance result as to the level of the objective accomplishment. The classroom research enables teachers in the originality and the creativity in the suitable problem solving.

3) Schools: The interrelationship between groups of teachers is to be extended, including the individual relationship; namely, the cooperation in finding problems, the analysis for the course, and the rendition. The reason is that each teacher in a school attains a different dexterity or aptitude. Whereby, these potentialities can be evoked and integrated for the creation of a qualitative research.
4) Education Coterie: The classroom research outcome is generally beneficial to the academic dissemination, impelling an incessant academic performance development. The image of those with a teaching profession is deemed to be good, and extensively acceptable through a systematic performance.

2.17 THE ADMINISTRATOR'S ROLE ON THE CLASSROOM RESEARCH

The administrator's role on the classroom research promotion is a behavioural performance according to the administrative function to promote the classroom research in five facets, i.e.

1) The Classroom Research Promotion to Success

McClelland. (1961: 156) referred to the character of the successful administrator which is to comprise of following attributes:

1.1) Tremendous responsibility;
1.2) Acquires a performance target;
1.3) Requires to attain the feedback data on time for their work to perceive the existing success or failure, in order that they could make a correct decision for the next performance.
1.4) Requires to work with brilliant people, so that he may be able to improve his own endowment to be relevant with those who are highly able.

The above attitude is an incentive for the perseverance in progressing the accomplishment. This is in congruent with Pattaya Saihoo and others (1983: 143) who inferred that the administration to success for the school research depends upon the requirement of the administrator who stipulates the polity or the lucid instruction. Because this decision associates with the manpower, the budget, and the suitable superimposing material for the research. In this matter, Ekchai Guisukpan (1985: 59) inferred that in the administration to the organization objective accomplishment of administrators, following the incentive principle has to be taken into consideration:

1) Has any incentive been built up for subordinates to sense that their present tasks are interesting and challenging for their endowment, inducing a wish to take more responsibilities?
2) Are there any awareness in the subordinates as to what their superiors expect of
them in their performance, and what is required of them to achieve the stipulated standard of
the organization?

Gowit Prawalpruek (1998: 35) stated that administrators must keep a successful visage
of the execution all the time, with a respond to the diversified requirements for organization
personnel. Hereby, the principal stages for the execution are:

1. To arrange a meeting to cooperate in the policy synthesisization among executives.
2. To cooperate in scrutinizing the concordance and the completion in every level of
accomplishment, right from the operational factors, the products, including the impacts.
3. To concur in evaluating the school’s superior and inferior points.
4. To make an agreement that the work has to be developed; and this is an obligation
that must be adhered. The group must cooperate in the follow-up, the inspection, and the
assistance for each individual or each school to accomplish the stipulated goal in the agreed
criterion, within the designated time.
5. Administrators support teachers to exercise in accordance with the stipulated
procedure, through visits and enquiries, and encouragement, as well as recommending new
innovations periodically to the executors.

Nateetip Somkietkul (1990: 85) purported that a successful organization should attain
following characters:

1. The organization must be flexible with a good working system, with an ability to
adapt itself to varying circumstances all the time.
2. Administrators and the executors pursue the stipulated objective.
3. The organization’s objective is acceptable to the personnel in every level.
4. There is an open communication lending to the reliance of administrators on various
problem solutions.
5. The system of the organization structure associates with the objective, the duty, and
the organization milieus.
6. The decision pertaining to the daily performance would be decentralized to
personnel in the lower levels.
7. The spirit and morale of the personnel are always good.
The support for the success in the classroom research is through the incentive and the support for the accomplishment of the classroom researcher in the stipulated objective. Administrators are to deploy management system to be propitious to the classroom research, and this should be in congruent with the interest of the classroom researcher.

2) The Compliance for the Teacher in the Classroom Research

The giving of compliance is a part of the management in encouraging operators in their performance. Herzberg and Others (1959: 87)\textsuperscript{91} stated that the giving of compliance is an incentive factor to instigate men who are in the mediocrity to be eager for their work. Hence making them feel that:

- (1) Their work is interesting, and challenging, without tediousness, and this work needs their full effort.
- (2) They are independent to perform the committed task, and are able to use their initiation to the full steam.
- (3) They partake in the accomplishment of the goal and objective for the working group or for the unit.
- (4) They receive a cordial approval for the accomplishment of the work, especially from their supervisors.
- (5) The particular work lends to the self-improvement in terms of knowledge, the skill, the ability, and the increasing experience.

Somyos Naweeekarn (1978: 64)\textsuperscript{90} inferred that the emolument or the consequence is a vital determinant, lending to the meliorated behaviour. However, such melioration depends upon the satisfaction on the emoluments. Whereby, an individual has to acknowledge that such emolument is derived from his own performance. Should the emolument be required to affect the aspiration of a person, then he must acknowledge that a change in the meaningful level would induce a change to his own operational consequence.

The Department of General Education (1999: 97)\textsuperscript{93} stipulated a significant operational procedure for administrators. This is the promotion on encouraging and building a good morale and spirit in the functional performance and to decrease all problems that may discontenance the working morale and spirit. Moreover, supports are to be given on the operational performance to the meliority, through the use of the operational process innovation. This
includes various activities such as a parley to present the best performance; the support for a visit to the demonstration of the best performance; the promotion for the performance outcome to become the foundation of the position progression in the hierarchy.

Wichai Tosuwanjinda (1988: 131) inferred that an administrator should adhere to the principle in encouraging subordinates in following factors:

1) An individual should take part in their own work planning and in stipulating his own working procedure, whereby he would have more incentive in accomplishing the particular task.

2) A person always needs to be praised in whatever status or position he may be. Therefore a suitable praise and exaltation to each person would be a good incentive for a better performance.

3) A praise and a reward for an outstanding worker would urge a competition, enabling the personnel to be zealous with more perseverance in the endeavour to get some commendations for themselves.

In conclusion, compliance to teachers for their classroom research is to give an honor with a praise and exaltation the teachers who are capable in the research. Whereby, administrators are to inspire the spirit and pride of teachers for their own research, including the dissemination of the research to the pervasion.

3) The Giving of Significance to the Classroom Research

The classroom research is a significant apparatus for the learning and teaching process development. In the application of the research for the benefit of the learning and teaching, the teachers themselves must be able to execute the research and able to apply the research outcome correctly and advantageously to the actual problematic condition.

Hass. (1957: 44) showed the significance in supporting teachers in their professional development. Whereby, the distinctive factors are that the teaching professional must be supported and improved; and every teacher must study and try to execute the research earnestly by themselves, for the instructional progress, theoretically, and practically. This practice has to be done consecutively, so that teachers can acquire the initiation and origination of their own creations.
Kyte. (1960: 93)\textsuperscript{96} propounded a method for the teachers’ quality improvement, through the support for teachers in making a try on the classroom research, using the content, the material, instruments, the teaching method, and the modern way of classroom arrangement. Amongst teachers experimenting or working on the same subject, there is to be an interchange of knowledge, the opinion, and the experience. Teachers will be trained in giving lectures and discourses in various activities, in the school level and in the locality level. Teachers should also be supported in writing articles or books in promulgating the knowledge and experience; or teachers may be assigned in their versed aspects or on the subject of their special interests. This is in coherent with Supang Jantawanij. (1985: 82)\textsuperscript{97} who commented that the structure of the unit and the administrative system are factors engendering an atmosphere that is felicitous to the educational research. The structural constituent of the unit is the purveyance for a good basic data center, facilitating the use of data. There should be sufficient documents and literatures for the each matter of research, and each of the subject has been researched by well trained research committee. There should be sufficient equipment and facilities in executing the research, along with the research budget. The administrative system component is composed of the appropriate purveyance and the allotment of personnel, and various resources for the research. In this case, there should also be a leader with a high potentiality, coupling with the means, or network for the research connection and dissemination. This idea is in consort with Napapom Singtad. (1988: 106)\textsuperscript{98} reported on the ponderance of the endowment development on the research for teachers and the permanent personnel on the education. These people would become the school researchers. Whereby, the necessary basic capability on the research of teachers and the permanent personnel would oblige for their knowledge and good attitude to the research. Hence, this would be propitious for cooperation in the research and for curriculum developments in various units. Whereby, the knowledge from the research is useful for the problem analysis, instruction techniques, as well as in devising the learning and teaching media. This is a procedure in improving the educational quality.

Wanlop Gunsab (1991: 124)\textsuperscript{99} stated that in the school research, the administrator has to look at the school in the systematic form. This refers to the conspicuous perception in the incumbent association of various components in the school system, regarding the factors, the process, and the products. This is because problems in the school system may be
engendered in the factorial level, or in the process level, or even in the product level. The research is obliging to the answer as to the mien of problems or defects occurring in the particular school system.

In conclusion, the significance given to the classroom research is on the grounds of perception on the benefit of the school research, where administrators have to instigate teachers in executing researches to acquire a new knowledge or method for the benefit of learning and teaching improvement and development.

4) The Responsibility to the Teacher Executing the Classroom Research

The responsibility is meaningful in the research management to the proficiency. Chester (1966)\textsuperscript{100} exercised a research and found that the responsibility of school administrators in the support for the capability enhancement of teachers is composed of: the support for teachers to study and give a trial on the research; the use of various instructional techniques; the abetment for teachers to partake in the training plan, the demonstration on the teaching method so that teachers may be acquainted with many models of teaching; the debate on the problem of the teaching improvement in the meeting; the programme for teachers in the school to take turns in visiting other classes making an observation on the teaching; the purveyance for resource persons to assist in the training; the discussion on instructional problems; the evaluation and the follow-up on the training; the debate and the instructional demonstration; the orientation to assist new teachers; the constructive comment on teachers' performance; a free time for teachers to join in the debate on the instructional problem. Moreover, teachers are to give more time in the teaching. They are to partake in choosing the videotape, as well as other instructional materials. Arrangements for academic trainings are to be put up to enhance teachers. Teachers are to be encouraged in the reading from the text or articles on the instructive subject to improve their instructional technique. In this case teachers are supported to make use of the instructional programme for their teaching improvement. Meetings are to be put up to evaluate the result of the classroom visits. Altogether, fees for transportation, allowances, and lodgings are to be paid to teachers for their academic meetings.

Kiti Tayakanond. (1989:47)\textsuperscript{101} concluded that an administrator who is a developer spends most of his time with his subordinate, and assign them on new tasks, abetting them to
be self-reliance, full of responsibilities, diligence, and creativity. An administrator has to be attentive to see that teachers who execute the classroom research are assisted in the knowledge the understanding and the resource sources on the research matter to achieve the stipulated aim.

5) Support to the Positional Progress for Teachers in the Classroom Research

The classroom research is a phase of the positional progression of a civil servant. This is considered as an important stage of the personnel management, and can also be considered as a reward. Since it is the reward that can satisfy people, hence the reward is an incentive for the performance.

Sompong Kasemsin. (1978: 33) inferred that the performing condition of members in any one organization should be rewarded. A promotion for a good worker would be an incentive for subordinates or coworkers to be ardent in executing their functions industriously, with reliance and good morale. Such is the rewarding principle for civil servants.

Wanlop Chanmanee. (1988: 69) inferred that teachers should take following criteria of the research procedure into consideration:

1) It has to be found out whether the particular research be beneficial to the development of the work under one's responsibility.

2) Apart from the benefit to the work under one's responsibility, the research must also be beneficial to other people or other units, and should also be acceptable in the educational coterie.

3) The research outcome must not be obscure. The data interpretation must be explicit, with a correct and common understanding in the same direction.

4) The research relies upon the data, and the information, as well as the profound and continuous research study.

5) The researcher must study the particular matter scrupulously and intensively and become thoroughly versed in the subject of study, with an ability to diversify this knowledge to the benefit of other people or other relevant units, in their teaching or for their effective educational development.

6) The current condition of the matter to be researched.
From the study on various theories and concepts, it can be abridged that an administrator has to utilize the teacher's research as the standard in considering the good performance or the suitability in the promotion for teachers. The role of administrators to the classroom research encouragement is a functional behaviour, where administrators must abet school teachers to make a research development or to solve the learning and teaching problem through the research process. Hence the accomplishment in the classroom research is to be supported. Whereby, the compliance is to be given to teachers executing the classroom research; as well as the significance is to be given for the classroom research; along with the responsibility for the teacher performing the classroom research; and likewise, the progress is to be supported in the promotion of position for the teachers who accomplished the classroom research.

2.18 REVIEW OF RELATED RESEARCHES

2.18.1 The research related to the training

From the study on the relevant research with the personnel development encouragement model through the training, it was found that most patterns are similar.

Somkit Mattrapan. (1997, 151 - 169)\textsuperscript{104} developed the personnel development of encouragement model to reinforce the performance on group processing for locality leader in the village level. The researcher stipulated the training curriculum development model in six stages as follows:

1) To make a research study and to analyze on the basic data;
2) The basic data is to be used in the curriculum;
3) The training activity model is to be set up;
4) The trial on the training curriculum;
5) The training curriculum evaluation;
6) The training curriculum amendment and melioration.

Suchart Leetrakul. (2000, 86 – 87)\textsuperscript{105} developed the training curriculum for pre-school children of the construction workers in Bangkok, where the development is to be divided into three stages:
1) A survey on the basic data;
2) To draw up the training curriculum;
3) The trial on the training curriculum.

Sakorn Putpam. (2001, 63 – 65) developed the curriculum pertaining to the protection in the misuse of medicine and the abuse of drugs. This curriculum is for personnel in the Fundamental Public Health. The research is divided into four stages:

1) To study the documents and related researches with the construction of the training curriculum;
2) The setting up and the development on the structure of the training curriculum;
3) The trial on the training curriculum;
4) The development and the improvement on the training curriculum.

The curriculum component is composed of the problematic condition, the necessity of the training curriculum, the objective of the curriculum, the behavioural aim, the content of the activity, and the training method, as well as the evaluation method.

Vichit Suranruangchai. (2001, 81-63) developed the training curriculum on the knowledge pertaining to the AIDS control and protection for primary school teachers. The research is divided into five stages:

1) To study the basic data;
2) To set up the training curriculum;
3) To check on the quality of the training curriculum;
4) To adapt and meliorate the training curriculum;
5) To make a follow-up and to evaluate on the training curriculum.

The curriculum constituent is composed of the problematic condition, the necessity, and the curriculum objective. Whereby, the training unit is composed of a specific aim, the content, the training, the training activity, the training media, and the training evaluation method.

Narong Chayayont. (2002, 61 – 71) developed the training curriculum for the administrative attribute potentiation for department heads of Rajamangala Institute of Technology. This research has six stages:
1) The survey on basic data to develop the training curriculum;
2) The trial on the training curriculum;
3) The training curriculum is to be ameliorated after the trial.

The structure of the training curriculum has three parts, i.e. the problematic condition, the necessity of the training, and the objective of the curriculum. The training caption is composed of the behavioural aim, the training content, the activities, the training method, and the evaluation.

Yuwadee Ruecha. (2002, 171-173) developed the training curriculum for the learning and the teaching in the issuance principle for nursing professors. This research has 4 stages:

1) The basic data survey;
2) The training curriculum creation;
3) The trial on the training curriculum;
4) The study on the efficacy of the curriculum, the aim of the curriculum, the objective of the curriculum, the expected capacity of trainees, and the content of the training.

Suriya Hemasawat. (2002:230) developed the training curriculum for teachers in secondary schools, to reinforce the capacity in the development on Basic Education Curriculum. The development stages are:

1) The basic data analysis.
2) To stipulate the aim of the training curriculum and to provide the contents and the learning experience.
3) To propose the procedure in applying the training curriculum.
4) To stipulate the criteria in measuring and evaluating the training.

Ekchai Uafua. (2002, 46 – 47) developed the training curriculum to reinforce the attribute on the leadership and on the group working for students of Ramkamhaeng University. Hereby, Jurai Chumrum. (2002, 110-13) developed the training curriculum to reinforce the endowment of the personnel in students activities of the Rajabhat Institute, on “The Teamwork Creation and Development”, with four stages of research:

1) Basic data analysis.
2) The construction of training curriculum and the checking on curriculum
There are three parts in the curriculum constituent, i.e. the derivation of the training, the curriculum objective, and the training unit, which is comprised of the training topic, the behavioural aim, training content, activities, training technique, and the training evaluation.

Tongsuk Wansaen. (2003, 213-214) developed a vocational training curriculum on the silk weaving of Mudmee (which is the typical style of weaving in the northeastern Thailand) for people in the rural area, and conducted the research in three stages:

1) Study on the fundamental stage to develop the training curriculum.
2) To construct and to develop the training curriculum structure.
3) To evaluate the training curriculum.

There are five parts on the constituents, i.e. the problematic condition and the needs; the curriculum objective; the intended capability; the training unit; and the procedure on the training curriculum application.

From the study on relevant researches to the training curriculum development, it was found that most researches exercise similar stages of research, and this can be divided into four stages:

1) To survey on the basic data of apparent problems.
2) To construct the curriculum.
3) To exercise a trial on the training curriculum
4) To evaluate the training.

The curriculum constituent is composed of the problematic condition and the necessity, the training curriculum objective, as well as the training unit, which is composed of the behavioural aim, the training content, the activities, the training method, the training media, and the evaluation.

From the above it was found that the personnel development promotion model through the training has four stages for the performance process:
1) The fundamental study: This is a survey on the fundamental data of the current problematic condition for the stipulation of the training curriculum. This is the requirement analysis for the training.

2) The curriculum construction: This is the training curriculum designation on the basis of fundamental data, and the current problematic condition.

3) The curriculum training exercise: This is a trial on the developed curriculum.

4) The curriculum follow-up: This is the evaluation on the achievement from the said curriculum training.

The researcher made use from the study of these relevant theories and concepts, and thereby, designated stages of the research as follows:

1) Stage One: To evaluate the need in the pedagogue personnel development support through the training model. This is the requirement of training participants pertaining to the contents, the training method, the resource persons, the training media, and the training location.

2) Stage 2: The outcome of the analysis on the need in the pedagogue personnel development support through the training model, is used as stipulation on the training curriculum.

3) Stage 3: The training execution on 'The Classroom Research'.

4) Stage 4: The training evaluations are: the pretest and the posttest evaluation on the training achievement. This includes the evaluation on the opinion of teachers to the personnel development support through the training, in the subject of 'The Classroom Research'.

2.18.2 Research Study related to the Classroom Research done in Thailand

Yaopa Boonjaroen. (2000) studied on the pertinent constituent to the classroom research of the teacher in the secondary education, Bangkok, and found that the important causes for the requirement in classroom research are:

1) The need to find a teaching procedure that is interesting to students with higher learning achievement;

2) The problem solving in the learning and the assistance to students;

3) To perform an academic achievement for a promotion to C8 Level;
4) The administrator's support for the classroom research;
5) The cooperation and the partaking in the classroom research of pedagogue colleagues.

Pranee Noonnoi (2000) studied on the teachers' competencies development on the classroom research through an interview and found that the component of the classroom research is comprised of the attribute of the pedagogue researcher, the problem analysis process, the innovation development process, the academic product inspection process, the document validity, and the important attribute of the classroom research.

Nantawan Sawaspoon (2000) studied on "The Course of Pedagogue Researcher Development: Case Study on Distinguished Primary School Teacher". This research is aimed on the development procedure for the development of pedagogue researchers. From the case study on a distinguished primary education teacher through the inclusive study, the study on the personal background (autobiography), the document analysis, the partaking observation, and the interview. Consequently, following can be inferred.

The development course to the pedagogue researcher in this case study commenced from the personal character in questing for knowledge, the keenness in pondering, absorbed in reading, content to write, and loves the nature. Such attribute is developed from the learning, the way in observing the daily performance, the analysis, the synthesis, and the accumulation of lifetime experience, including the integrated pedagogue work with fondness for children, lending to a will to develop the life quality of the children. These factors induced to the development process to become the pedagogue researcher, using a research model of the curriculum document analysis, the case study, and the research development; and the problem found in this research is the students' problem. Whereby, the teacher perceived an opportunity of learning is the inceptive vision, the problem analysis with an extensive observation on students, leading to a concept of helping the individual child. The research objective is to develop the Thai language learning for daily use and for the future use as well, through a variety of teaching method and in the integration to be suitable for the condition and the learning nature of students. The benefit of the research is the development for students, the self-development for more unerring and creative teaching, with an impact to the development of pedagogue
colleagues.


1) Research Process of the pedagogue researcher commenced from the administrative problem on the learning and teaching with a lack of readiness on students. The pedagogue researcher chose a research issue that can be applied in the pedagogy. The topic of study is the teacher's aptitude and is usually on the teaching development. Included in the research are the teaching media, the locality curriculum structure, and the research apparatus devised by the teacher, himself. Such apparatus is to be inspected by a specialist. The sample group for the research is the group of students in the classroom. There is to be a data analysis, the content analysis, and an analysis through a descriptive statistic.

2) The research outcome has been applied by the teacher in the learning and teaching development, as well as in the teaching media development to develop students and to develop the performance in the pedagogy.

Praparat Meelua (2001) exercised a research on "A Study on the Endowment of Pedagogue Researcher" through a questionnaire to survey on the opinion of 348 pedagogue researcher in the position of C8 Level, under the Office of the National Primary Education Commission, pertaining to the necessary capacity of pedagogue researchers, and the endowment composition of the pedagogue researchers; and following outcome has been found.

1) The vital aspects for pedagogue researcher for the classroom research accomplishment are:

- The acquirement of profound and extensive knowledge in the teaching subject;
- Acquires cognition on the curriculum;
- Able to analyze, and discriminate the problems and the true requirements of students correctly and positively;
- Acquires an academic honesty and integrity;
- Being a good reader;
- Attains the scrupulousness, and works in orderliness;
- Being broad minded and listen to others people's points, giving a respect to the academic opinion of others;
- Always study on pedagogy documents, texts, and other media;
- Acquires a freedom to think creatively; and
- Have a faith in the research.

2) There are seven constituent in the research capacity:

- The knowledge and the capability in the research regulation and the research proceeding;
- The dexterity in the learning and teaching development;
- The etiquette of a researcher;
- Pedagogy character and ethics;
- The adroitness in collecting the data;
- The ability in evaluating the learning and in the data application;
- The ability in analyzing and synthesizing the knowledge.

Ladda Kampolngarm (2001) researched on "The effectiveness of Classroom Research towards Teaching Behaviour of Teachers" to study on the process and the product of the classroom research giving an effect to the behaviour of the pedagogue researcher who manages the class administration and who provides the learning-teaching activity, and to study on the behaviour of the teacher with an effect to the classroom research. It was found that the process and the outcome of the classroom research supports the conception of pedagogy researchers and confidence in the operation, with an incentive in the research in developing the learning and teaching. This conduces to the behaviour of teacher to be attentive in the learning and keen in the research, with a perception in the opportunity of the learning. The teacher would give the attention to the observation, the notation, and the interest in students with a pedagogy responsibility. All in all, the process and the outcome of the classroom research induces the behaviour of the pedagogue researcher as follows: partake with students in their learning with helpful amicability; the learning/teaching activities are arranged with pupil-centered; flexibility is given to the content, the activities, and the learning media; parents have an opportunity to partake in the stipulation of the Learning - teaching activity; acquire better understanding in students, as to their behaviour and their problems
lending to a good relationship between the teacher and students; the ability to give recommendations and the support according to ability and the desire of students.

Boonmee Bhapawa (2001) studied on “The Role of Primary School Administrators in Supporting on the Teachers for the preparation of Classroom Research” and found that school administrators encouraged teachers in the school research at a ‘moderate’ level, but supported teachers the position progression of teachers at a ‘high’ level.

Weerapol Chalardyaem (2001) studied on the classroom research of primary education teachers of the Nongbua Lumpoo Provincial Primary Education Office and found that only 15.21 percent of primary school teachers ever done classroom research. While 7.60 percent did only one subject of the research, and 6.14 percent ventured on -5 subjects. Primary schools supported the research at a ‘moderate’ level. Teachers in the primary schools acquire a ‘low’ knowledge and skill on the research. However, teachers in primary schools deemed that they acquire quite a lot of knowledge about the research. Problems for classroom research of primary school teachers are at a ‘high’ level. These are: a lack of knowledge on the research principle; a lack of sources on the research; lack of budget and materials to support the research; and lack of specialists to give advice on the research. While the requirement pertaining to the classroom research of primary school teachers is at a ‘high’ level, in the consideration of the support on the budget, the materials, the specialist to give advice on the research, and resources for research.

2.18.3 Research done in foreign country

Schempp, P.G. (1995) studied on “The Learning on the Actual Function: The Analysis on the Teacher’s Quest for Knowledge”. The objective of the research is to study and analyze the criteria used by teachers in questing for knowledge to gain the teaching accomplishment. This was exercised through a case study on two teachers, with a teaching experience in the state school, located on the north-west of the United States. The data has been taken through the observation without the partaking. Whereby, there was a use of a videotape to collect pictures, the document analysis, the informal interviews, and the Ethnographic technique to assist in the data analysis. It was found that there was a conspicuous module on the knowledge of the teacher has five components, i.e.

1) The classroom research operation (the teacher observed various experiences


22. Ibid.

23. Ibid.


37 Ibid.


85 Ibid.


