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CHAPTER 6
MAJOR FINDINGS, CONCLUSIONS, AND SUGGESTIONS

6.0 REVIEW
The present research was studied under the problem:

"A STUDY OF EDUCATIONAL REFORMS IN VOCATIONAL EDUCATION IN THAILAND AND STUDENTS' ATTITUDE TOWARDS IT"

The "Educational reforms" means the improvement of Thai education in consistency with social needs, technological advances and socio-economic conditions, selection, maintenance and change or addition to the usual ways. The objectives of educational reforms are:

1) To raise Thai education standard quality of education to the international level,

2) To campaign for the continuous learning achievement for the Thai youths,

3) To bring Thai education to the excellence.

Educational reforms in the present study comprised of four aspects of reforms:

1) Reform in building and environment
2) Reform in personnel development
3) Reform in curriculum and instruction
4) Reform in system of educational administration

The "students' attitude" means the attitude of vocational students belonging to the vocational government schools as well as vocational private schools towards the educational reforms in vocational education, which divided into two aspects i.e.

1) Perception of students regarding educational reforms,
2) Educational reforms in related to social change.

OBJECTIVES OF THE STUDY
To fulfill the expectation requirement, the objectives of the present research has frame as follow:
1) To study the existing educational reforms in vocational education in Thailand.

2) To compare the mean scores of the level of existing educational reforms in vocational education in Thailand rated by vocational school teachers belonging to different groups of sex, age, teaching experience, qualification, size of school, and type of school.

3) To study students' attitude towards the reforms in vocational education.

4) To compare the mean scores of students' attitude towards the reforms in vocational education classified by sex, level of education of parents, monthly income of parents, occupation of parents, size of school, and type of school.

VARIABLES OF THE STUDY

TEACHERS' GROUP

1) Independent variables
   1.1 Sex of teacher : Male, Female
   1.2 Age of teachers : 20-30 year, 31-40 year, 41-50 year, 51-60 year
   1.3 Teaching experience : 01-10 year, 11-20 year, 21-30 year, 31-40 year
   1.4 Qualification : graduate, post graduate
   1.5 Size of school : Small, Medium, Large, very large
   1.6 Type of school : Government school, Private school

2) Dependent Variable
   The educational reforms in vocational education, which consisted of four aspects:
   1) Reform in building and environment
   2) Reform in personnel development
   3) Reform in curriculum and instruction
   4) Reform in system of educational administration

STUDENTS' GROUP

1) Independent variables
   1.1 Sex of students : Male, Female
1.2 Level of education of parents: Under Graduate, Graduate

1.3 Monthly income of parents: 05,000-10,000 Baht, 10,001-15,000 Baht, 15,001-20,000 Baht, 20,001 Baht onwards

1.4 Occupation of parents: Labour, Agriculture, Business, Government

1.5 Size of school: Small, Medium, Large, very large

1.6 Type of school: Government school, Private school

2) Dependent Variable

Attitude of students towards educational reforms in vocational education, which consisted of two aspects:

1) Perception of students regarding educational reforms,

2) Educational reforms in related to social change.

In the present study, the researcher desired to make use of the tool in the form of rating scale. There are two tools to be used for this study.

1) The scale to measure educational reforms in vocational education.

This kind of the tool divided into two parts: Part 1: The first part of the tool enquire about the respondents' personal Information such as; sex, age, teaching experience, qualification, size of school, and type of school. Part 2: The second part of the tool enquire about educational reforms in vocational education. The researcher constructed the tool in form of rating scale to measure educational reforms in vocational education, which consisted of 60 statements. Each statement has five levels of opinion regarding the educational reforms in vocational education i.e. "strongly agree", "agree", "uncertain", "disagree", strongly disagree".

2) The scale to measure the students' attitude towards educational in vocational education.

This kind of the tool divided into two parts: Part 1: The first part of the tool enquire about the respondents' personal Information such as; sex, level of education of parents, monthly income of parents, occupation of parents, size of school, and type of school. Part 2: Second part of the tool enquire the students' attitude towards
educational reforms in vocational education. The researcher constructed this tool in form of rating scale which consisted of 35 statements. Each statement has five levels of opinion regarding the students' attitude towards educational reforms in vocational education i.e. "strongly agree", "agree", "uncertain", "disagree", strongly disagree".

The Likert method was used for constructing the present scale. The method of constructing the scale is devised by Likert in 1932. According to this method, the following steps were to be observed for constructing the scale:

(1) The first step of constructing the tool, the researcher was to study and procure the tools available in the market. The researcher collected the large number of statements depicting the different aspects of educational reforms from the past research studies and the documents. Then the researcher started to construct many statements as possible that would measure the educational reforms.

(2) The second step was the screening of the statements and scaling the statements in five points: "Strongly disagree", "Disagree", "Uncertain", "Agree", "Strongly Agree".

(3) Prepared the preparation form of the scale and evaluated the statements in preparation form of the scale by the help of guide. On the basis of the past research studies, literature, documents and the discussion with experts person working in this field, the researcher constructed 80 statements for the preparation form of the scale to measure the educational reforms in vocational education and 65 statements for the preparation form of the scale to measure students' attitude towards educational reforms in vocational education.

(4) Selection the statements for the inclusion of the pre-pilot form of the scales. There were 65 statements included in the pre-pilot form of the scale to measure educational reforms in vocational education. There were 40 statements included in the pre-pilot form of the scale to measure students' attitude towards educational reforms in vocational education. After the pre-pilot form of the scale to measure educational reforms in vocational education, and the scale to measure students' attitude towards educational reforms in vocational education, the researcher went to the step of judge agreement.
(5) Judges' agreement

For the step of judges' agreement of the pre-pilot form of the scale to measure educational reforms in vocational education, and the scale to measure students' attitude towards educational reforms in vocational education, the list of judges consisted of members from different walks of life like, educational officer, senior teacher, school administrator, leader of community, government officer, parents, psychologist and politician. The judges were requested to tick mark (✓) against the appropriate column whether they “agree” or “uncertain” or “disagree” with each statement, keeping in mind the statement should measure educational reforms in vocational education and students' attitude towards educational reforms in vocational education. There were 70 judges who response the agreement over each statement of the scale to measure educational reforms in vocational education and the scale to measure students' attitude towards educational reforms in vocational education. For finding the general degree of the agreement among the judges over each statement, the index of item objective congruence (IOC) was applied. The method of index of item objective congruence (IOC) was calculated.

(4) Selected the statements for the inclusion in the pilot study.

After the IOC method was applied to the responses of the judges' agreement, the obtained scores were compared with the criteria. The statements which could be accepted to be the statements included in the pilot form of the scale should obtained IOC value greater than 0.50. There were 65 statements in the pre-pilot form of the scale to measure educational reform in vocational education, 60 statements were selected to be included in the pilot form of the scale to measure educational reform in vocational education of the present study. There were 40 statements in the pre-pilot form of the scale to measure students' attitude towards educational reform in vocational education, 35 statements were selected to be included in the pilot form of the scale to measure educational reform in vocational education of the present study.

(5) Administration of the pilot scale for the purpose of analyzing the statements.

(6) Determining the validity, discrimination and reliability of the scale.

For determining discrimination of the scale, the $t$ - value was applied.
There were 60 statements of the pilot form of the scale to measure educational reforms in vocational education obtained the \( t - \text{value} \) greater than 1.75 which given statements differentiated between high and low groups. Thus, the 60 statements of the scale to measure educational reforms in vocational education helped the researcher to gain confidence for the data collection. There were 35 statements of the pilot form of the scale to measure students' attitude towards educational reforms in vocational education obtained the \( t - \text{value} \) greater than 1.75 which given statements differentiated between high and low groups. Thus, the 35 statements of the scale to measure students' attitude towards educational reforms in vocational education helped the researcher to gain confidence for the data collection.

For determining reliability of the scale, it was observed that the scale to measure educational reforms in vocational education were found the correlation efficient \( (r) = 0.91 \) and the scale to measure students' attitude towards educational reforms in vocational education were found the correlation efficient \( (r) = 0.90 \). It can be said that the both scale have high reliability.

For determining validity of the scale, the score of each item indicated the \( r_{xy} \) value. There were 60 statements in the scale to measure educational reforms in vocational education and 35 statements in the scale to measure students' attitude towards educational reforms in vocational education, obtained the \( r_{xy} \) value which were significant at 0.01 level of confidence.

(7) Administration of the final form of the scale to study the educational reforms in vocational education and students' attitude towards educational reforms in vocational education.

There were 3,500 vocational school students from 83 vocational schools were selected to be the sample of the study.

The data yielded by the tools were analyzed according to the hypotheses. The following techniques of analyses of data and the statistical calculations were employed.

1) The percentage was used to calculate the number of sample.

2) In order to determine the level of educational reforms in vocational education and students' attitude towards educational reforms in vocational education, the mean and
standard deviation were calculated.

3) The t-test was used to test the significant of difference between mean scores of educational reforms rated by vocational school teachers belonging to different groups of sex, qualification, type of school, and used to test the significant of difference between mean scores of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to different groups of sex of teacher and student, qualification of teacher, level of education of parents, type of school.

4) The analysis of variance (ANOVA) was used to test the significance of difference between mean scores of the educational reforms in vocational education rated by vocational school teachers belonging to different groups of age of teacher, teaching experience, and size of school, and was used to test the significance of difference between mean scores of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to different groups of monthly income of parents, occupation of parents, and size of school.

5) The Studentized Range Statistics Test (q) was used just to get the general idea about the difference between mean scores of various groups of educational reforms in vocational education and students' attitude towards educational reforms rated by vocational school teachers and vocational school students belonging to different groups of age, teaching experience, monthly income of parents, occupation of parents, and size of school.

6) The 0.05 and 0.01 level of significance were considered satisfactory for the acceptance or rejection of the null hypotheses.

7) The frequency distribution, tables were prepared and placed in the report to present the data comprehensively.

6.1 MAJOR FINDINGS

Educational reforms in vocational education

1) The mean score of educational reforms in vocational education rated by vocational school teachers (N = 1,660) was 4.25 (S.D. = 0.70) which was in high level. There were four aspects of educational reforms in vocational education i.e. building and
environment, personnel development, curriculum and instruction, and system of educational administration. The highest mean scores of educational reforms in vocational education related to the personnel development ($\bar{X} = 4.44$, S.D. = 0.60) whereas the lowest mean scores of educational reforms in vocational education related to the building and environment ($\bar{X} = 3.99$, S.D. = 0.80). All of four aspects regarding educational reforms in vocational education obtained mean scores at high level in every aspect.

2) The mean score of educational reforms in vocational education rated by vocational school teachers belonging to male group was 4.28 (S.D. = 0.64) which was in high level whereas the mean score of educational reforms in vocational education rated by vocational school teachers belonging to female group was 4.23 (S.D. = 0.80) which was also in high level.

There was no significance of different between mean scores educational reforms in vocational education in total score and in different aspects rated by vocational school teachers belonging to different groups of sex. It can be said that the mean score of educational reforms in vocational education rated by vocational school teachers (male) has equal value with the mean score of educational reforms in vocational education rated by vocational school teachers (female).

3) The mean score of educational reforms in vocational education rated by vocational school teachers belonging to 20 – 30 year was 4.20 (S.D. = 1.06) which was in high level whereas the mean score of educational reforms in vocational education rated by vocational school teachers belonging to 31 - 40 year, 41 – 50 year, and 51 – 60 year were 4.31 (S.D. = 0.68), 4.39 (S.D. = 0.70), 4.10 (S.D. = 0.73) respectively, which were in high level.

There was significance of different between mean scores educational reforms in vocational education in total score and in different aspects rated by vocational school teachers belonging to different groups of age. It can be said that age did affect on the level of the mean scores of educational reforms in vocational education rated by vocational school teachers.

4) The mean score of educational reforms in vocational education rated by
vocational school teachers belonging to 01 – 10 year of teaching experience was 4.22 (S.D. = 0.89) which was in high level whereas the mean score of educational reforms in vocational education rated by vocational school teachers belonging to 11 - 20 year, 21 – 30 year, and 31 – 40 year of teaching experience were 4.34 (S.D. = 0.62), 4.40 (S.D. = 0.66), 4.06 (S.D. = 0.86) respectively, which were in high level.

There was significance of different between mean scores educational reforms in vocational education in total score and in different aspects rated by vocational school teachers belonging to different groups of teaching experience. It can be said that teaching experience did affect on the level of the mean scores of educational reforms in vocational education rated by vocational school teachers.

5) The mean score of educational reforms in vocational education rated by vocational school teachers belonging to post graduate group was 4.44 (S.D. = 0.61) which was in high level whereas the mean score of educational reforms in vocational education rated by vocational school teachers belonging to graduate group was 4.07 (S.D. = 0.80) which was also in high level.

There was significance of different between mean scores educational reforms in vocational education in total score and in different aspects rated by vocational school teachers belonging to different groups of qualification. It can be said that the mean score of educational reforms in vocational education rated by vocational school teachers belonging to post graduate group has greater value than that of the mean score of educational reforms in vocational education rated by vocational school teachers belonging to graduate group.

6) The mean score of educational reforms in vocational education rated by vocational school teachers belonging to very large size of school was 4.24 (S.D. = 0.80) which was in high level whereas the mean score of educational reforms in vocational education rated by vocational school teachers belonging to large, medium, small size of school were 4.29 (S.D. = 0.60), 4.35 (S.D. = 0.67), 4.12 (S.D. = 0.69) respectively, which were in high level.

There was significance of different between mean scores educational reforms in vocational education in total score and in different aspects rated by vocational school
teachers belonging to different groups of size of school. It can be said that size of school did affect on the level of the mean scores of educational reforms in vocational education rated by vocational school teachers.

7) The mean score of educational reforms in vocational education rated by vocational school teachers belonging to government group obtained was 4.35 (S.D. = 0.65) which was in high level whereas the mean score of educational reforms in vocational education rated by vocational school teachers belonging to private group was 4.16 (S.D. = 0.68) which was also in high level.

There was significance of different between mean scores educational reforms in vocational education in total score and in different aspects rated by vocational school teachers belonging to different groups of type of school. It can be said that the mean score of educational reforms in vocational education rated by vocational school teachers belonging to government school has greater value than that of the mean score of educational reforms in vocational education rated by vocational school teachers belonging to private school.

Students' attitude towards educational reforms in vocational education

8) The mean score of students' attitude towards educational reforms in vocational education rated by vocational school students (N = 3,500) was 4.09 (S.D. = 0.102), which was in high level. It was further seen that the table inferred the mean and standard deviation of two aspects of students' attitude towards educational reforms in vocational education (N = 3,500). The mean score of students' attitude towards educational reforms in vocational education (perception of students towards educational reforms) was 4.13 (S.D. = 1.02), which was in high level.

The mean score of students' attitude towards educational reforms in vocational education (educational reforms in related to social change) was 4.06 (S.D. = 1.03) which was in very high level.

9) The mean score of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to male group was 4.11 (S.D. = 1.05) which was in high level whereas the mean score of students' attitude towards educational reforms in vocational education rated by vocational school students
belonging to female group was 4.08 (S.D. = 1.04) which was also in high level.

There was no significance of difference between the mean scores of students' attitude towards educational reforms in vocational education in total score and in different aspects rated by vocational school students belonging to different groups of sex. It can be said that the mean score of students' attitude towards educational reforms in vocational education rated by vocational school students (male) has equal value with the mean score of students' attitude towards educational reforms in vocational education rated by vocational school students (female).

10) The mean score of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to under graduate group was 3.93 (S.D. = 1.06) which was in high level whereas the mean score of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to graduate group was 4.25 (S.D. = 0.85) which was also in high level.

There was significance of difference between the mean scores of students' attitude towards educational reforms in vocational education in total score and in different aspects rated by vocational school students belonging to different groups of level of education of parents. It can be said that the mean score of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to under graduate group of level of education of parents has smaller value than that of the mean score of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to graduate group of level of education of parents.

11) The mean score of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to 05,000-10,000 baht was 3.97 (S.D. = 1.13) which was in high level whereas the mean score of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to 10,001-15,000 baht, 15,001-20,000 baht, and 20,001 baht onwards were 4.07 (S.D. = 1.08), 4.11 (S.D. = 1.10), 4.21 (S.D. = 0.88) respectively, which were in high level.
There was significance of difference between the mean scores of students' attitude towards educational reforms in vocational education in total score and in different aspects rated by vocational school students belonging to different groups of monthly income of parents. It can be said that monthly income of parents did affect on the level of the mean scores of students' attitude towards educational reforms in vocational education rated by vocational school students.

12) The mean score of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to labour group of occupation of parents was 3.92 (S.D. = 1.16) which was in high level whereas the mean score of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to agriculture, business, and government group of occupation were 4.09 (S.D. = 1.01), 4.12 (S.D. = 1.02), 4.23 (S.D. = 0.92) respectively, which were in high level.

There was significance of difference between the mean scores of students' attitude towards educational reforms in vocational education in total score and in different aspects rated by vocational school students belonging to different groups of occupation of parents. It can be said that occupation of parents did affect on the level of the mean scores of students' attitude towards educational reforms in vocational education rated by vocational school students.

13) The mean score of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to small group of size of school was 3.99 (S.D. = 1.16) which was in high level whereas the mean score of students' attitude towards educational reforms in vocational education rated by vocational school students belonging to medium, large, and very large group of size of school were 4.08 (S.D. = 1.05), 4.10 (S.D. = 1.06), 4.21 (S.D. = 0.85) respectively, which were in high level.

There was significance of difference between the mean scores of students' attitude towards educational reforms in vocational education in total score and in different aspects rated by vocational school students belonging to different groups of size of school. It can be said that size of school did affect on the level of the mean score
of students’ attitude towards educational reforms in vocational education rated by vocational school students.

14) The mean score of students’ attitude towards educational reforms in vocational education rated by vocational school students belonging to government school was 4.11 (S.D. = 0.98) which was in high level whereas the mean score of students’ attitude towards educational reforms in vocational education rated by vocational school students belonging to private school was 4.07 (S.D. = 0.96) which was also in high level.

There was no significance of difference between the mean scores of students’ attitude towards educational reforms in vocational education in total score and in different aspects rated by vocational school students belonging to different groups of type of school. It can be said that the mean score of students’ attitude towards educational reforms in vocational education rated by vocational school students belonging to government school has equal value with the mean score of students’ attitude towards educational reforms in vocational education rated by vocational school students belonging to private school.

6.2 CONCLUSIONS

It can be concluded that the mean scores of educational reforms in vocational education rated by vocational school teachers and the mean scores of students’ attitude towards educational reforms in vocational education rated by vocational school students were in high level.

For the comparison of the mean scores of educational reforms in vocational education rated by vocational school teachers belonging to different groups of variables, the t-test and F-test was used for the analysis. It was found that there was no significance of difference between the scores of educational reforms in vocational education rated by vocational school teachers belonging to different groups of sex whereas there was the significance of difference between the scores of educational reforms in vocational education rated by vocational school teachers belonging to different groups of age, teaching experience, qualification, size of school and type of school. For better understanding, the conclusions of the comparison of the mean
scores of educational reforms in vocational education rated by vocational school teachers belonging to different groups of sex, age, teaching experience, qualification, size of school, and type of school is presented in table 6.1 - 6.2

**TABLE 6.1**

CONCLUSION OF THE COMPARISON OF THE LEVEL OF SCORES OF EDUCATIONAL REFORMS IN VOCATIONAL EDUCATION RATED BY VOCATIONAL SCHOOL TEACHERS CLASSIFIED BY SEX, AGE, TEACHING EXPERIENCE, QUALIFICATION, SIZE OF SCHOOL, TYPE OF SCHOOL

<table>
<thead>
<tr>
<th>EDUCATIONAL REFORMS</th>
<th>Sex</th>
<th>Age</th>
<th>Teaching experience</th>
<th>Qualification</th>
<th>Size of school</th>
<th>Type of school</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Building and environment</td>
<td>ns</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>(2) Personnel development</td>
<td>ns</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>(3) Curriculum and instruction</td>
<td>ns</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>*</td>
</tr>
<tr>
<td>(4) System of educational administration</td>
<td>ns</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>TOTAL</td>
<td>ns</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
</tbody>
</table>

ns = Not significant

** = Significant at 0.01 level of confidence

* = Significant at 0.05 level of confidence
TABLE 6.2
CONCLUSION OF THE COMPARISON OF THE LEVEL OF SCORES OF STUDENTS' ATTITUDE TOWARDS EDUCATIONAL REFORMS IN VOCATIONAL EDUCATION RATED BY VOCATIONAL SCHOOL STUDENTS CLASSIFIED BY SEX, LEVEL OF EDUCATION OF PARENTS, MONTHLY INCOME OF PARENTS, OCCUPATION OF PARENTS, SIZE OF SCHOOL, TYPE OF SCHOOL

<table>
<thead>
<tr>
<th>STUDENTS' ATTITUDE</th>
<th>Sex</th>
<th>Level of education of parents</th>
<th>Monthly income of parents</th>
<th>Occupation of parents</th>
<th>Size of school</th>
<th>Type of school</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Perception of students regarding education reforms</td>
<td>ns</td>
<td>**</td>
<td>ns</td>
<td>*</td>
<td>*</td>
<td>ns</td>
</tr>
<tr>
<td>(2) Educational reforms in related to social change</td>
<td>ns</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>*</td>
<td>ns</td>
</tr>
<tr>
<td>TOTAL</td>
<td>ns</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>*</td>
<td>ns</td>
</tr>
</tbody>
</table>

ns = Not significant

** = Significant at 0.01 level of confidence

* = Significant at 0.05 level of confidence

6.3 SUGGESTIONS
To reform the vocational education in consistency with the technology, economy, politics and government in Thailand, by means of selection, maintenance, change, or addition to the usual past methods, the educational reforms are arrange in the following aspects.

1) Reforms in building and environment
2) Reform in personnel development
3) Reform in curriculum and instruction
4) Reform in system of educational administration

The vocational education institute in Thailand refers to the furthering of the education after the secondary education, in pursuing an academic knowledge and a higher vocational knowledge in various vocational institutes in the private and
government sectors. The status of Thailand's vocational education should be as follows:

(1) The increment in the number of the students in the vocational education should press the vocational education development, quantitatively and qualitatively, to meet the requirement.

(2) The extension in the phases of economic, commercial, industries, and the international investment should be necessitated the institutes of vocational education to accelerate their production of the graduates.

(3) The tendency on the information society should be necessitated the personnel development on the branches of computer and communication.

(4) The environment system is in a critical status. The institutes of vocational education should begin to recognize the trend of the sustainable development by adapting the role of the institutes of vocational education to participate in developing the sustainable country.

(5) The institutes of vocational education should make themselves for adaptation to the materialized society, making an access to the international countries, with a necessity to conserve the characteristic of the national culture.

(6) The vocational institutes should be independent in their administration; while the present budget.

(7) The vocational institute should have a practical standard for the development, as well as an efficacy in the organizational administration structure.

The Thai vocational education reformation procedure should have to be adjusted for the future role and direction, as proposed by the International Education Committee. (2003 : 50) on the trend of the international higher education as follows:

(1) The institutes of vocational education should be diversified to meet the requirements of the learners, with the preeminence in the academic education and the specific occupational education. Whereby the juveniles must not be blocked by the selective examination, leaving them in despair of no certificates nor suitable training for the working market.
(2) The rules and regulations which had been an impediment in the execution should be loosen. If possible, the institute should develop their caliber to become free from the bureaucracy, and become universities under the surveillance of the government.

(3) To create an inducement, and the independence for the flexible performance, enable them to compete with the private sectors.

(4) Small vocational education institutes should be develop their potentiality to eventually become repressive institutes.

(5) The government should have a conspicuous policy in devising the development strategy, so that people would be more interested in the science and technology.

(6) The learners in the governmental higher education institutes should also participate in the burden of the true expenses in the educational administration of each branch of subject, with the educational fund criterion, educational credit fund, and other financial assistance for the social and economic inferiors.

Suggestions for educational reforms

1) Building and environment

1) The vocational institute should emphasized developing of building and environment, such as keeping the buildings and education places in clean, orderly, and good looking condition, arrange the school site in good order, having realizing shaded areas, without pollution, provide sufficient supply of educational media, materials, equipments and technology, promote the climate that favorably contributes to learning and teaching, provide sufficient sources of drinking and consuming water, expanded the school size and the supply of modern equipment equally for all sectors, the buildings and the classrooms are not utilized to the maximum benefits. School climate and environment should contribute to happy learning and teaching. Emphasize should be place on natural learning and teaching as well. Students should be inspired with the sense of cleanness, discipline, generosity, love and unity. School must be ready for study and must have large school charts, classrooms,
libraries, laboratories, computer rooms, and sports fields, all of which are appropriate to the school locations. A complete set of school equipment should be provided purchased at fair market prices, for the maximum utilization and school benefits. A full complement of teaching personnel should be provided. In case of insufficiency, their should be a replacement with retired personal, local intellectuals, and specialized people for helping the teaching functions, or their must be a remote education system through the satellite. Local organizations must participate in the arrangement of education, whether in technical or managerial aspect. They must, for example, set the courses to match the local needs, such as the needs for English study in primary classes, agricultural study, construction, and electricity courses, etc. Tuition fees and traditional fees for education must be charged, so as to improve the education sites and to have a complete supply of education equipment. Exception to such fees may be permitted to poor students. Rewarded pay is granted to the students who make development, practice, or who have job training, all of which produce income and give benefit to school, examples of this are vegetable planting, poultry rising, fish feeding, etc. The participation of groups of people groups or communities in resource search is promoted, so as to encourage the administrative functions, educational arrangements, teacher's welfare such as accommodations, rewards overtime pay, extra-tuition fees, training costs and also to pay off the teacher's debts. Study outcomes should be assessed and evaluated with emphasis on the products, which are student qualities, as arranged in the course. Schools should be approved by parents and localities of the quality and standard.

2) Personnel development

The Ministry of education should promote the system for development of teachers and educational personnel, so the teaching will be further enhanced and become a highly respected profession. The Ministry, in this regard, should take a supervisory and coordinating role to develop the in service teachers and personnel. There should be an organization for teachers and personnel. The organization should enjoy the status of independent body administered by a professional council under supervision of Ministry. The organization should have the powers and duties for setting
professional standard; issuing and withdrawal of licenses; overseeing maintenance of professional standards and ethics. In establishing the organization for teachers and personnel, there should be a law on salaries, enumeration, welfare and other benefits. System for utilization of teacher potential is also important. Whether or not to teacher is good depends on the system of utilization teacher and his development during in-service. For this besides sound teacher-training systems there should be an evaluation of in-service teachers should be there. Incentive system for teachers may motivate them to develop regularly.

The government therefore should make policies regarding salary, increment teaching position based on qualification, experience and performance along with a sound curriculum. Department which makes use of the teachers have to prepare “On-the-Job Training” also. This is to have guardian-teacher, Master-teacher, teacher-expert on technology and qualified teachers, etc.

Since teacher career is high level occupation which is important to the nation’s future. Therefore, establishing Occupation Association according to individual subject is very important, in order to develop oneself in each line. Association ought to be established at district level and provincial level and from provinces; they should join together at national level into ‘Federation’. As regards establishment of Royal Academy of Teacher, it may be done in two ways. The first way is let the Federation of Teachers in various subjects set criteria for selecting fellow of Royal Academy of Teacher or the second way is let them select Post-doctoral fellow form teachers who have output of research in learning and teaching higher then Ph.D. degree. Post-doctoral fellowship position, which is, quality of membership Royal Academy of Teacher fellow of Royal Academy of Teacher is the highest organization of technological teachers. There should be a need of explicitness in the production of teachers, on the production amount, the objective, the method, and the substance. There should be promote the intelligent students to enroll to be the teachers in vocational education. There should be an incentive for proficient personnel to become a teacher. The teaching process should emphasizes on centering the teachers than the learners. The instruction in the apprentice institutes should be the continuous academic knowledge development.
There should be the recruitment process for the teachers has no assurance for a suitable persons to become teachers. Therefore, there should be a way in producing and developing the teachers. Following are some proposals: (1) To emphasize on the research; (2) To emphasize on the selection of students to be the vocational teachers; (3) To emphasize on the moral and integrity of the teacher; (4) To emphasize on the teaching for children to use their initiations; (5) To make development on the teachers through a selective process; (6) There must be an issuance of a Professional Teacher Certificate to keep the national standard of the teachers, with a specific criterion. There should be a procedure in the reformation of the pedagogies, with implicit possibilities, such as: (1) To arrange the teaching quality assurance mechanics for the teachers; whereby teachers must have an aim that a teacher operates a high profession. There should be a report on the progress of the pupils. There must also be a development on: the functional skill in accordance with the standard of the essence subject; the pupils' operating standard; and the standard of the chance to enter the school education. (2) Every teacher must be trained prior to being commissioned. Whereby, the training must be done continuously, as long as the person is still in this profession. This is for the reason of the development in the challenging professional skill. In this case there must be a cooperation from the parents, the private organizations, and various vocational associations in developing the teachers.

3) Curriculum and Instruction

After analyzing the notion of the people on the basic education quality from the foreign trend on the reformation and from the essence in the National Education Act, 1999, following are the recommendations on the vocational education reformation:

Curriculum Reformation: The educational institutes should be quite dependent in developing their curriculum in accordance with the indigenous requirements, within the concept from the national curriculum frame. Such curriculum should be incessant in the objective and should be integrated to focus on the problem solving. The emphasis must be done on the skillfulness of new modern technologies. The enrollment examinations to enter the vocational education should be impartial, using the accumulated grades of the secondary level as a criterion for the consideration.
Moreover the treatise approval system must also be improved, to become more liberalized, and also for the reason of qualitative competition.

The Educational Reformation of the Learners: The learning-teaching system must be adapted to centralize the pupils in the learning process. The teaching method of the teachers should change from the atmosphere of the unilateral precept, to the problem-solving learning (progressive education), the practical learning, and abutment for the self-education of the students. Whereby, there must be a development of the libraries and the learning network for the self-learning of the students. In this case, the teaching behavior of the teachers must be developed every year, so that teachers are able to adapt themselves to the globalization trend.

The moral principles should be developed along with the basic vocational training skill. The objective of the fundamental education is to prepare for the knowledge as well as the moral principles and the ethics. These people should also gain the vocational skill which enables them to be self-dependable. They should also be selfless, altruistic, and participate in the social and community development. The system of the moral principles and the vocational skill should be adapted to cohere with the Thai culture and the Thai way of living.

The Educational Institute Reformation: Schools should make self-adaptation all around: (1) To acquire a flexible school executives who are able to communicate independently with all concerned in bring the school to the excellent perspective. (2) The objectives of the school should be potent, with ardency, and should be equipped with a development evaluation system to those objectives (3) Teachers should be versed in their profession, and should be encouraged to use the various media and advance technologies (4) The students and the students should be come performers, initiators, and should also be industrious. The groups of parents should play an explicit role in the cooperation of the school development with earnest determination. Framing of aims based on philosophy at every state of education is the heart of human development. People are the unity of socio-economy and politics. If the human is developed only as an economic animal and is unable to create the state of being human as philosophized in Buddhism, the educational system, it is assumed, is
bound to be failure. Hence, creation of human in its real sense as a high spiritual being is the final aim, while creation of human in economic and political aspect is a secondary aim.

Learning process at everyone should emphasize at developing human both psychophysically and spiritually. Specifically, intellect has relationship with the mind, and visa verse. Clean mind with concentration leads to intellectual level. Trained intellect leads to higher state of mind. As regards intellectual, its common meaning is training the pupils to practice analyzing, understand macro principle and see the relationship between macro point of view and the facts at micro level, such as principle or democratic guideline comprising of human rights, principle of public opinion (real) and principle reason (scientific), principle of benefit of the whole and part. This is the important principle. As regards other principles, they are secondary principles, i.e. election, decentralization of power, assembly system. These are secondary principles. If there are small principles but there are no important principles as mentioned above, it will be democracy which is not complete.

System of learning and teaching in the present time may emphasize little on analyzing. The curriculum has aimed at this. In promoting the teachers to prepare teaching plan has also the same aim. Learning/teaching at primary level-junior high school level has these things but teaching system where they have selections normally destroys creative minds and independent thinking of pupils, therefore, teaching system ought to be improved.

Reform process of instruction should look at the aim of teaching process, measurement of result, evaluation, how the teacher performs work and how to develop teachers and administrators to promote technology. As regards the promotion of knowledge, there are several questions are printed books available sufficient in Thailand in another are text books prepared and translate from other languages as per the demand because to enable the students think creatively and enhance their research attitude the availability of books in the Thai language itself is most needs. Thai students cannot read textbooks written in language other than Thai and textbooks, it is observed
in Thai are not available sufficiently, it is obviously necessary to get books translate in the next 10 years, as is being done in Japan and many other developing countries.

In reforming system and instructional process, there ought to be regional level centre to examine learning/teaching system as to whether it is in accordance with the objectives laid down in the national plan.

In the time of globalization, school system has to prepare students to enable to adjust one with new situations in the future. In rapidly changing society man will have to learn and renew himself rapidly. Technology changes rapidly, way of life change in the light of socio-economy and politic changes quickly, therefore, life long education has its own value to be realized by the Thai system of education.

The problem is how to make education life centre, life orient. The society in Thailand, it can be said, is in search of the solution for the 100 years.

The first step in this direction should be to prepare short-term course curricular keeping in mind the need of students. Such short-term courses should frame in accordance to present need of the society. The government will have to regard it as policy to support expenses in investment to every institute which arranges vocational education. Create and extend network for learning by television more widely.

Government may invest national level stage system and keep it in tape, television or computer. Similarity Encyclopedia may transform into video or computer system and can be made accessible to all. Government may create network station to act as source for knowledge similar to gasoline station in order to let people come for filling energy of knowledge for may promote network system for knowledge of the community.

Government will have to promote government institute and private sector to have a role in education, train members or society in his institute. Each institute has its own expertise, i.e. the assembly has a role in give in political aspect of education to the people. Employment system, both in governmental and private system must recognize the value of training for self development. Giving credit to trainees ought to be arranged in a peruse system, i.e. giving increment of salaries to teacher-lecturer. Teacher is the most important variable factor in developing quality of learning and quality of human being. Selective system is very important for creating teacher occupation so as to
attract intellectual and good teachers to this profession. Adjustment of teachers' salary, progressive system and working conditions of the teachers are the points of attraction for youngsters to enter into this profession. At the same time, teacher seeking progress will have to begin at junior high school level or senior his schools, by selection students with good marks, have attitude and suitable personality for training by awarding scholarship for education. Selective system must open wide for adults who complete common education line or other occupations to enter into this occupation later, by letting them study 'Educational Technology' about a year as an additional subject, selective system for Teacher's Training Institute should be similar. The system may have to be separated from examination system for entering central part by arranging special additional system, etc.

In general curriculum ought to be adjusted to enable the government to prepare personals for entering on the situations which are varied. Curriculum which emphasizes education in philosophical aspect, humanity aspect as well as psychological aspect is, therefore, important central able. Practical teaching also ought to be improved, especially practical teaching in school, parent's teacher system should be prepared precisely and their responsibilities should be clear. There should be incentive system and remuneration. Creating personality and attitude of teachers are very important. Arrangement of dormitory system which has atmosphere of learning, with teachers to direct learning/teaching in the dormitory, is the important part of this system of teaching. There must be exchanging of teachers between universities and Ministry of Education in order to acquaint each another.

4) System of educational administration

System in administering in the present time is the system which responds to an era of society which to make the government strong, by using principle of law as important principle in administering the country. But when it comes to this era, it is era for competition in economy and technology. It is competition in free system. Therefore, efficient administration and management require different condition. Arrangement of an organization in vertical line is slow and causes delay and inefficiency. Trend of administration/management in the present time wants an organization in horizontal line
with short vertical lines: Therefore, division of Working Units into small units, but qualitative with high technology and performing work in network in linking one another is pattern of modern time.

Necessity to have this pattern of Working Unit is very acute in administrative system of undergraduate level and even in lower level of education. Because production unit in education place, i.e. each teacher-lecturer is not a group of persons which unite together as production section of a factory, wherein an individual person cannot produce anything (in a factory), i.e. car assembly plant, therefore, quality in production is dependent on individual teacher-lecturer has the same standard of basic education (The low standard criteria has really been specified and can be examined). Therefore, administrative system of educational place has to prepare organization pattern in horizontal line with one step of command line only which is headmaster. As for chief of Region, he is ‘Primus inter phases’, which is, he acts as chairman of lectures in the Region only.

Budget system and personnel administrative system of educational are, therefore, not normal governmental system which has to be controlled similar to the control of budget of line item or position system, but 'unit cost' system ought to be used in controlling budget and academic rank system.

Budget source of vocational education institute ought to have variable sources in order to be efficient and free in preparing. There must be own income source, i.e. income from education service arrangement and research, private business sector, income from benefit of 'Endowment Fund' etc. There should be a guideline for the community to participate in education at this level, but how must is the community interested in preparing education to their children is the ting to be considered properly. This aspect is difficult to set as general principle; it is up to the local area and the situation. Therefore, the government ought to extend the support and participation of the community in preparing education widely. At the same time, community has to be developed to a strong one. The reforming administrative and management system should consider about the principle of unity of policy and efficiency in implementation. If there is a preparation of administrative system in order to let educational places take
responsibilities of themselves more increasingly and let the local area and the province be preparation unit, in the real sense, administration in the central part ought to emphasize on specifying policy and planning, specify national standard, mechanism for directing and care taking, emphasize on promotion more than taking action by themselves. If such role is adjusted, the government ought to unite three. Working Units together i.e. Ministry of Education, National Education Board Office into Ministry of national Education by distributing manpower and distributing work to the lower level and most of all, to Universities. Or if it cannot unite in one Ministry, it should be prepared in the pattern of Federation of Ministries by reducing work in each unit or get-rid of repetitive work and prepare Standing Conference to co-ordinate work of 3 Ministries, by having a small Secretary-Government office to prepare Agenda of Meeting and report the outcome (agreement). The Prime Minister of Deputy Prime Minister should be Chairman of Standing conference.

5) Students' attitude towards educational reforms in vocational education

The students' attitude towards educational reforms in vocational education refers to perception of students regarding educational reforms in vocational education and educational reforms in related to educational reforms in vocational education. The students in vocational institute should be encouraged to have perception and awareness regarding educational reforms in vocational education, such as knowledge about oneself and society. Scientific and technological knowledge and skills, as well as knowledge, understanding and experience in management, and utilization of natural resources and environment in a balanced and sustainable manner; knowledge and skills in pursuing one's career and capability of leading a happy life. The vocational institutions should provide substance and arrange activities in line with the learners' interest and aptitudes, bearing in mind individual differences; provide training in thinking process, management, how to face various situations and application of knowledge for obviating and solving problem; organizing activities for learners to draw from authentic experience, enable the learners to think critically. The vocational institutions should enable the students to learn at all times and all places. At present, social condition have changed rapidly under the influence of globalization. With the current of globalization,
Thailand has changed in many ways such as economy, society, culture, science, technology, politics and government. Thailand must develop the countries in economy and industry as well as personnel or human resources development. The education system that must be effective in its limited scope can no further satisfy the needs of people in this age of globalization. Therefore, to give the country the competitive potential and permanent stability with Thai dignity, "humans", which are essential resources, must be urgently developed. To make people attain high quality is, thus, vital and is the duty of education system to make appropriate arrangement in correspondence with changes in economy, society, culture, science, technology, politics and government.

Enjoying the status of a central body in charge of formulating policy and plan for national education, the students' attitude should be developed with the cooperation with parents, guardians, and all parties concerned in the community in accord with the students' potentiality.

The state should promote the running and establishment, in sufficient number and with efficient functioning, of all types of lifelong learning resources, namely public libraries, science and Technology Park, sports & recreation, data based, and other sources of learning.

Curricular should aim of improving the quality of life suitable for each individual's age and potentiality. The substance of the curricular, both academic and professional, should aim at human development with desirable balance regarding knowledge, critical thinking-creative thinking, capability, virtue and social responsibility. The institutions should cooperate with individuals, families, communities, community organization, local administration organizations, private persons, private organizations, professional bodies, religious institutions, enterprises, and other social institutions. Vocational education should encourage instructors to carry out research for developing suitable learning for learners at vocational education.

**SUGGESTIONS FOR FURTHER STUDY**

From the results of the study, it was perceived that there should be the
suggestions for further study regarding educational reform in vocational education. The suggestions for further study would be as follow:

1) There should be the study of the guideline for promoting the practice of educational reforms in vocational education.

2) There should be the study of problems and obstacles regarding educational reforms in vocation in vocational education.

3) There should be the study of the model of performing the educational reforms in vocational education for the best practice.

4) There should be the study of the development of the perception and awareness of students, teachers, parents, and community regarding educational reforms in vocational education.

5) There should be the study of the experimental research concerning to the practice of educational reforms in vocational education.

6) There should be the study of the educational reforms in primary and secondary education.

7) There should be the study of the educational reforms in vocational education in different countries.

8) There should be the study of the comparative study of educational reforms in vocational education in government and private sectors.