

# CURRICULUM QUALITY MANAGEMENT WITH QUALITY CYCLE AND FOUR IDDHIPADAS IN HIGHER EDUCATION INSTITUTIONS

# **Aphinant Chantanee**

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy (Buddhist Studies)

Graduate School

Mahachulalongkornrajavidyalaya University

C.E. 2018



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The Graduate School of Mahachulalongkornrajavidyalaya University has approved this dissertation entitled "Curriculum Quality Management with Quality Cycle and Four Iddhipādas in Higher Education Institutions", as a part of education according to its Degree of Doctor of Philosophy in Buddhist Studies.

(Dr. Phramaha Somboon Vuddhikaro)
Dean of Graduate School

Dissertation Examination

Committee:

Chairperson

(Assoc. Prof. Dr. Suvin Ruksat)

Member

(Dr. Phramaha Somphong Khunakaro)

Champer

(Prof. Dr. Chamnong Adivadhanasit)

N.J. Lide

Member

(Asst. Prof. Dr. Naddhira Sridee)

Pat Member

(Prof. Dr. Pataraporn Sirikarnchana)

**Dissertation Examination** 

Committee:

Dr. Phramaha Somphong Khunakaro Chairperson

Prof.Dr. Chamnong Adivadhanasit Member

Researcher:

(Assoc. Prof. Aphinant Chantanee)

Dissertation Title : Curriculum Quality Management with Quality

Cycle and Four Iddhipadas in the Higher

**Education Institution** 

**Researcher** : Assoc. Prof. Aphinant Chantanee

**Degree** : Doctor of Philosophy (Buddhist Studies)

**Dissertation Supervisory Committee** 

: Phramaha Somphong Khunakaro, Dr. Pāļi IX,

M.A., Ph.D. (Philosophy)

: Prof. Dr. Chamnong Adivadhanasit B.A.

(Buddhist Studies), M.A., Ph.D. (Sociology)

**Date of Graduation** : March 17, 2019

# **Abstract**

This research aims, to study the importance of quality assurance within the curriculum in higher education institutions, both public and private, to study the qualification cycle of PDCA and the Four Iddhipadas related to quality assurance, and the method to develop higher quality courses in higher education institutions. Interviews with 36 experts and 400 questionnaires were conducted, the results were as follows.

The curriculum management shall be carried out in accordance with the standard curriculum of the Ministry of Education Announcement B.E.2548 and B.E. 2558 and the National Curriculum Framework for Higher Education B.E.2552, as detailed in the Educational Quality Assurance Manual. Higher Education C.E.2014 is a practice. The quality cycle (PDCA), P = the start of the academic year, D = record the performance of the academic year 12, C = check the quality of the program according to the plan and A = Based on the results. For the exercise of the Four Iddhipadas, instructors responsible for the course (Chanda) is passionate and eager to do what is good for students. Viriya is patient and persevere. And a mentor (Citta) who is dedicated to quality management. And evaluation (Vimamsa) to improve and further development in the next academic year. Opinions on the quality cycle (PDCA) Including the high level was high (3.62), Planning highest average, Checking was

high, Acting was average and Doing was the lowest. The opinions on the Four Iddhipadas, were the high level average Viriya, had the highest level, Citta was the high level, Vimamsa is the high lelvel and the Chanda high level average.

For the relationship between the opinion on the Quality Cycle (PDCA) and the Four Iddhipadas. The planning and Four Iddhipadas have positive correlation coefficient were correlatively high level, was found in 4 aspects. The doing and Four Iddhipadas have positive correlation coefficient were high level. The checking and Four Iddhipadas have positive correlation were correlatively high levels. The acting and Four Iddhipadas have Positive correlation coefficient were correlatively high level. By conclusion, the relationship between the opinions of the sample and the performance of the quality cycle (PDCA) and the Four Iddhipadas are positive correlation were correlatively high levels.

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# **Chapter I**

# Introduction

# 1.1 Background and Significance of the Problems

The quality and standard of the curriculum must be studied document and the persons concerned should be cared for and committed to the practice of the instructors.

# 1.1.1 Background of problem in compliance with quality standards and the curriculum standards.

The problem with internal quality assurance at the curriculum level or program. This is because the personnel and lecturers responsible for the curriculum do not understand or do not legalize to the quality assurance criteria for higher education. Because the benchmark. Indicators and Criteria for Grading the process of quality assurance in the internal quality assurance process consists of four stages<sup>1</sup>: Plan, Do or operation, Check or Study, and Act = PDCA, which proposal for Improvement as follows: P (Plan) = Start the planning process at the beginning of the graduate academic year, the results of previous years are used as planning data. The data must be collected from the open-closed system. D (Do) = Operation and recording of operating results, from the beginning of the academic year is the first month - the 12th month of the academic year. C (Check) = Perform quality assessment at the curriculum level or discipline, during the semester. A (Act) = Planning and implementing improvements based on evaluation results. The board of directors, the recommendations and evaluation results of the Internal Quality Assessment Board Plan to improve operations, or perhaps the recommendations of the Board of Management, prepare annual action plan and propose budget next year.

<sup>&</sup>lt;sup>1</sup> Officer of Higher Education Commission, Higher Education Quality Assurance Manual, 2014, p.22.

## 1.1.2 The importance of the problem

The National Education Act, of B.E.2542, Revised (No. 2), in B.E. 2545 requires Higher education institutions to ensure the quality of education as part of educational management" Internal Quality Assurance to evaluate and monitor the quality and educational standards of the institution from the inside by the personnel of the institution itself or by the organization that oversees the higher education.

For the Ministerial Regulation, B.E. 2553<sup>2</sup> requires higher education institution to develop an internal quality assurance system based on the academic freedom and the independence of the educational institution, to be effective and the effectiveness in improving the quality and standards of education of higher education institutions. The internal quality assessment is the assessment of the quality of education management, monitoring and quality control and educational standards of educational institutions, in the curriculum or program level. By studies "Curriculum Quality Management and Internal Education Standards with Quality Cycle and Four Iddhipadas", which is important as follows.

**Chanda** (proxy) is the patriotic thing to do, by the heart that loves is because of faith and believe in what they do. It should be based on actual results, person have heard the term.

Viriya (effort) is a commitment both physically and mentally, to learn and access the essence of the matter that thing, if do will do until expert as specialized knowledge.

**Citta** (thoughtfulness) is a mind focused and responsible, when the mind is focused, It will be carefully followed, this great present, social sophisticated new things, caused many each person has an obligation many do not know what to do before and after, reading time thought responsible.

**Vimamsa** (investigation) is reviewing the discriminatory thoughts on what has been done. Arising from an happy love (proxy) and made a commitment (persistence) anxiously and responsibilities (Citta) using judgment wisely and carefully, thus leading to the review itself, and review the organization or movement

<sup>&</sup>lt;sup>2</sup> Ministry of Education, Ministerial Regulation Education, 2009, p.2.

in reviewing what has been done to figure out what caused past that the advantages and disadvantages.

So that, Four Iddhipadas taking application in the management of graduate educate quality and the standards that, lecturers responsible for the curriculum and graduate educate, must start from the proxy, the will (Chanda) to create graduate educate to have the quality and standard, it is caused by the fact that the engagement will which will improve or enhance graduate educate programs (Master's degree and Ph.D.). It must be diligently (viriya) in the preparation to complete development documentation and teaching materials, textbooks and teaching books. By will pay attention (Citta) that is responsible for the staff responsible for curriculum development work, in addition to academic work then, also, be attentive follow-up study of graduate educate of all person, so as a learning result, to the suggestions that how the issue or topic or problem of research for a thesis or dissertation, until the thesis or dissertation exam and the defense thesis or dissertation. For a review of discriminatory (Vimamsa) is to review the process of learning and teaching at a grade each semester, and the process of preparing a thesis or dissertation, until monitor the quality and standards of the thesis or dissertation, before the publication of the public following, so that taking Buddhadhamma about Four Iddhipadas to apply graduate educate quality, by lecturers responsible for the curriculum and executive of graduate school must to student quality development and diligent academic development, with intent responsible of work for quality graduate educate and analysis or ponder carefully, so do the graduates quality and standards more higher.

Because of that, researcher decided to use Quality Cycle and Four Iddhipadas to develop personnel involved in the implementation of quality and standards education in accordance with guidelines for internal quality assurance for the curriculum in higher education, B.E.2014.

# 1.2 Objectives of the Research

- 1.2.1 To study the process of Internal Quality Assurance in Higher Education Institutions.
- 1.2.2 To compare of Four Iddhipadas and PDCA cycle Curriculum Quality Management in Higher Education Institutions.

1.2.3 The recommendations for improving Curriculum Quality Management based on Four Iddhipadas.

# 1.3 Statement of the Problems Desired to Know

- 1.3.1 What is the significance of Internal Quality Assurance?
- 1.3.2 What are relations between Iddhipadas and PDCA to IQA?
- 1.3.3 What are the recommendations as the process of developing IQA of Curriculum Management in Higher Education Institutions?

# **1.4 Scope of the Research**

# 1.4.1 Scope of Sources of Scriptures

- 1) Primary source: Tipitaka, Commentaries and Sub-commentaries, by using the Pali Text Society's English translations series.
- 2) Secondary source Buddhist textbooks research works and journals espectively Thai and English languages, such as National Qualifications Framework for Higher Education in Thailand and Manual for the Internal Quality Assurance for Higher Education Institution, 2014.

### 1.4.2 Scope of Content

The group is a content administrators, Instructors and personnel.

# 1.4.3 Scope of Timing

8 months: Oct.1, 2016 to May 30, 2017.

# 1.4.4 Scope of Area

In this research areas for researching have been pre-designated according to the field instructors and personnel total 14 Higher Education Institutions as follow:

- 1) Five Rajabhat University
- 2) Two Rajamangala University of Technology
- 3) Mahachulalongkornrajavidyalaya University
- 4) Mahamakut Buddhist University
- 5) Five the University of the Private

## 1.5 Definitions of Terms Used in Research

Analysis means is detailed examination of the elements or structure of something, typically as a basis for discussion or interpretation. The thing is which, there is virtue reach to arrive at the success according to the self-purposes, personnel hope the success in an anything, must behave completely, with the thing that call that, Four Iddhipadas separate keep be 4;

- 1) **Chanda** means satisfaction is the desire to do good deeds, love to do that and always desire to do better.
- 2) **Viriya** means perseverance, perseverance is diligent to do things with the effort to endure without endless business.
- 3) **Citta** means the mind is determined to be mindful of what is being done, and do it with the mind not the mind. Let's be devoted to the metaphysical devotion dedicated to what we do.
- 4) **Vimamsa** means reflect, use, reflect, investigate, and investigate. Lose in what to do is to plan, measure, improved the solution.

# Quality Cycle (Deming's Cycle; PDCA)

**Planning** means start the planning process at the beginning of the graduate school year, the results of previous years are used as planning data. The data must be collected from the open-closed system.

**Doing** means operation and recording of operating results, from the beginning of the academic year is the first month - the 12<sup>th</sup> month of the academic year.

**Checking** means perform quality assessment at the curriculum level or discipline, during the semester.

**Acting** means planning and implementing improvements based on evaluation results. The board of directors, the recommendations and evaluation results of the Internal Quality Assessment.

**Quality assurance** is an organization's guarantee that the product or service it offers meets the accepted quality standards. It is achieved by identifying what "quality" means in context; specifying methods by which its presence can be ensured; and specifying ways in which it can be measured to ensure conformance.

**Curriculum Quality Management** (CQM) meaning course management as the implementation of teaching and learning in accordance with the objectives set out in TQF 2, focus on the 5 learning outcomes.

**Personnel** mean personnel of relation and lecturer or Instructors responsible for the Curriculum in the quality assurance department.

# 1.6 Conceptual Framework

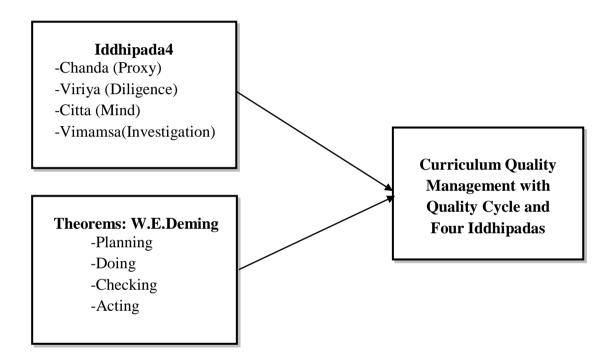


Figure 1.1 Conceptual Framework of Research

# **Chapter II**

# **Review of Related Literature and Research Works**

Study document and related research works with curriculum quality assurance, according to the internal quality assurance manual, in the Higher Education, C.E.2014 and Deming's PDCA Cycle; Plan, Do, Check, and Act, including to use of Four Iddhipadas in the management of the curriculum quality in higher education institution, which four component: Chanda, Viriya, Citta, and Vimamsa, The details are as follows:

### 2.1 Documents related to this research

# 2.1.1 Background Assessment of curriculum quality and standards

The need for internal quality assurance in higher education. The main mission of the college / institute / university. There are four aspects of production of graduates, research and development, academic service to society and preserving art and culture. Which These 4 missions are of great importance to the country development of both short and long term. Nowadays, there are many internal and external factors, that makes quality assurance education in the higher education is required to accelerate.

# 2.1.2 Regulations related to quality assessment and curriculum standards.

- 1) According to the National Education Act, B.E.2542 (C.E.1999)<sup>1</sup>, amendments (No.2), C.E.2001, determine all educational institutions to have an internal quality assurance system for every academic year.
- 2) Announcement of the Ministry of Education, subject curriculum standard for Higher Education level B.E.2548 (C.E.2005) and the office of the Higher Education Commission board, has adopted the standards of higher education, 7 august 2006, to standardized mechanism at the ministry level, board of directors and agency level, all

<sup>&</sup>lt;sup>1</sup> Manual for The Internal Quality Assurance for Higher Education Institutions : Office of the Higher Education Commission (OHEC), p.15.

higher education institutions will use it as a framework for educational quality assurance.

- 3) Notification of the Ministry of Education Re: National Framework for Higher Education on July 2, 2009, and the Royal Thai Government announced guidelines for the implementation of the National Higher Education Framework on July 16, 2009 to provide higher education. To meet the standards of higher education and quality assurance of graduates at each level.
- 4) Notification of Ministry of Education The standard of higher education institutions is April 24, 2011 as a mechanism to promote and direct higher education institutions to standardize by type or group of higher education institutions, namely, community college, group B, bachelor institutions, and institutions that focus on advanced research and produce graduate studies. Especially the doctoral degree.
- 5) Announcement of the Internal Quality Assurance Board of the Higher Education, subject action tracking check the quality of education (on 28 January 2013), by having the essence to obtain useful information for higher education institutions, stakeholders, and it is a public guarantee higher education institutions can create quality educational products that made the standards at determine.
- 6) Announcement of the Internal Quality Assurance Board (IQA) on Rules and Guidelines for Internal Quality Assurance in Higher Education Level, C.E. 2014; to have the curriculum level assessment, Faculty level and Institute Level assessment. The evaluation starts in the academic year 2014 onwards, and the curriculum and institution are monitored every three years.
- 7) Announcement of the Ministry of Education, subject curriculum standards for Higher Education level, C.E.2015, by the details of the practice in quality and more standard, which made the college / institute / university. The quality of teaching and learning are low, there is a problem in the implementation of the Internal Quality Assurance Board of Higher Education C.E. 2014 and the curriculum standards in higher education in C.E. 2015. It is the source for "Handbook of the Quality and Standard Assessment in the Curriculum" this up.
- 8) According to the announcement of the Higher Education Commission, guidelines for the Implementation of the National Higher Education Qualifications Framework (No.3), C.E.2015 "In the case of any higher education institute, will

provide details of the course specification (TQF 3), Field experience specification (TQF 4) (if any) Course report of the performance result (TQF 5), Field Experience Report of the results (TQF 6) (if any) and Program report (TQF 7). In other types, the higher education institutions can carry out the detailed information collection system according to the guidelines of TQF 3, TQF 4, TQF 5, TQF 6 and TQF 7, by can be adjusted or change topic to appropriate with the context of the higher education institutions that. In order that consider of The intention of TQF 3, TQF 4, TQF 5, TQF 6 and TQF 7".

The higher education institutions can set up: Key Performance Indicators (KPIs), performance result of the standard framework by self, which each course has the freedom to set up key performance indicator on follow, to evaluate and report the quality of the annual curriculum specified in section.1 - 6 of each course, in order the context and objective of the production to graduate, in order that they must be approved by the institution council. To during the higher education institution can not offer to adjust the new key performance indicator has completed. Use the same key performance indicator before, or if any course the purpose to determine the same key performance indicator (KPI 12 items), it can be done. If the curriculum is revised the new KPIs, to take the course offered the HEC knowing, for next the curriculum update (must be revised before or after the fifth anniversary).

9) According to the announcement of the Ministry of Education, subject the criteria for undergraduate curriculum C.E. 2015.

In item 8. Criteria for grading and Graduation Higher Education Institutions determine the measurement criteria. Minimum criteria for each course and the graduation criteria for the curriculum. This must be completed for the number of credit. Determine in the curriculum and must score an average of not less than 2.00 from the system level 4 or equivalent. It is considered as a Bachelor's degree.

- 10) The resolution of the Higher Education Commission (HEC) on the guidelines for acknowledging the approval or approval of higher education institutions on February 10, 2016 is as follows.
- (1) Curriculum to be submitted to the Office of the Higher Education Commission to acknowledge the approval or approval of courses of the Council of Higher Education as follows;

- New curriculum (newly developed)
- Updated version an improvement on the course of the curriculum, such as the objectives, structure, curriculum name, degree name, content and subject matter and the education system.
- The revised version (HEO 08, modified teacher) to improve teachers of curriculum and instructors.
- (2) The curriculum not to be submitted to the Office of the Higher Education Commission to acknowledge the approval or approval of the curriculum of the Council of Higher Education. This is an improvement on the course level, such as changing the course name, changing course code adding optional courses and the course description. The content of the curriculum is not affected.

In order that the higher education institution, send proof of improvement to the less curriculum. To approve the curriculum from the Council of Higher Education institution to the HEC to provide the curriculum information at always up to date.

- 11) According to the announcement of the Higher Education Commission on the policy update English standardized in the Higher Education Institutions, dated 12 April 2016, English in all courses and all levels. This is a good way to improve your language skills. English for students to be ready to graduate with professional knowledge and communication skills in English (Working Knowledge)
- Item 1. Higher education institutes shall set up policies and targets for raising English standards in higher education institutions in all curricula and all levels of education. This is a guideline for improving the English proficiency skills of students to be qualified graduates with professional knowledge and skills in English communication at working level.
- Item 2. Higher education institutions shall make plans to implement policies and targets. The indicators and evaluation are clearly.
- Item 3. Higher education institutions shall consider the improvement of teaching and learning management in English subjects. The goal is to achieve by determine.
- Item 4 . Higher education institutions shall consider extracurricular activities, media process and or environment. This will give students opportunities to improve their English skills by oneself.

Item 5. Higher education institutions shall consider all students. To testing knowledge of English. Test the tertiary standard created by the institution. It can be compared to the Common European Framework of Reference for Languages (CEFR) or other standards. In order to know the level of competence of each student and the higher education institution, it is necessary to consider the results of the English language proficiency test, the certificate of academic record or the certificate. By start from the academic year 2016 onwards.

- 12) More explanation, the Handbook to Internal Quality Assessment in Higher Education, 2014, as of July 4, 2016, is described as a clearer guideline.
  - Component 1: Curriculum Standard Supervision
  - Component 2: Graduates
  - Component 3: Students
  - Component 4: Teachers
  - Component 5: Curriculum and assessment of learners
  - Component 6: Learning support

#### 2.1.3 Conclusion

Internal quality assurance is a system and mechanism for developing, auditing, and assessing in the Curriculum / Program level for the operation of institutions according to the policies, objectives, and quality levels established by the institutions themselves or by their parent organizations. Accordingly, the internal quality assurance is regarded as one of the ongoing education management tasks of the institutions and parent organizations. Thus, this necessitates the establishment of an internal quality assurance system in each institution. Furthermore, annual internal quality assessment reports must be prepared and presented to institution councils, parent organizations, and other relevant organizations for consideration and be announced to the public in order to develop education quality and standards.

# 2.2 Standard of Higher Education Institutions B.E. 2546

According to Section 34 of the National Education Act, B.E.2542 (1999)<sup>2</sup>, as amended by the National Education Act (No.2), B.E.2545 (2002), determined the

<sup>&</sup>lt;sup>2</sup> Manual for the Internal Quality Assurance for Higher Education Institutions 2014, p.7.

Higher Education Commission, Offer standardized higher education in accordance with the requirements. According to the National Economic and Social Development Plan and the National Education Plan, by regarding the independence and academic excellence of higher education institutions in degree. Under the law governing the establishment of each institute and related laws. Committee on Higher Education, which operated institute standards of higher education, to take the development of higher education institutions according to the institutions with different philosophies, objectives and missions for sect up higher education institutions to manage education efficient and effective. Under of Section 8 and Section 16 of the Regulations. Ministry of Education, 2003 Minister of Education by the advice of the Commission on Higher Education, so announcement to the standard of higher education, as following.

- 1) The standards of higher education institutions consist of two standards.
- 1.1) The standards for capacity and readiness in education management consist of four sub-standards.
- (1) Physical, the higher education institutions there are buildings that Important of a good learned building, good all room types, usable space for teaching learning and activities. All types have enough, and suitable for the number of teachers. Number of students in each course and the number of students on the student acceptance plan. Based on living space to estimated buildings, including the library must be standardized. There are durable articles building, durable articles education and enough computers to manage education. In order that the buildings and building grounds must be stability and safe, hygienic, or otherwise necessary as required by law.
- (2) Academic, the higher education institutions have the potential and availability for academic missions by related with the vision, missions of higher education institutions and production plans. Graduates who meet the needs of the country and its users. By secured students will receive good educational service. Students can find quality knowledge, institutions must have high quality, efficient and effective academic management. Both in student accepted plan and graduates production, to manage the learning activities and teaching, learning evaluating result. Quality Assurance for learning and teaching, and the improvement of academic management.

- (3) Financial, the higher education institutions have financial availability, and statements by fund have a solid money plan. It is guaranteed that the institution will be able to studying according to the mission and goals set. Including availability with the future development plans, in order to maximize benefit for students and users of higher education services, the institute provides a financial report that shows the acquisition of revenue, effective allocation of expenditures, and is fairly clear. Including income to invest, risk assessment and analysis have a monitoring system to evaluate performance. Along with the use of all types, and there is a system to monitor the conflict of personnel at all levels.
- (4) Management, the higher education institutions have effective management systems. To conveying vision, and values to consistent practice in the same way, to the common practices in order to achieve the objectives and mission. By the Institute Council is responsible for overseeing the implementation of the plan, personal management of budget and assets, welfare administration provided to students and staff at all levels, as well as supervision, include monitoring and evaluation of operations in accordance with the rules, regulations and laws. The results of the governance of the Institute Council and the management of the Management at all levels to the community within the institution and outside the institution. Under good governance contains transparency principle. Accountability principles of Participation and Principles of Value.
- 1.2) Standards of Mission Implementation of Higher Education Institutions Composed of four sub-standards.
- (1) Production of graduates, the higher education institutions take qualified students. The number of students meets the student plan and meets the goal of producing graduates. Quality The institute produces graduates according to the characteristics. The focus of the institution meets the goals set or targeted and provide clear information to the public about the curriculum. The teaching and learning of instructors at promotes learning activities in the learning development. Both inside and outside the curriculum and respond the needs of students.
- (2) Research, the higher education institutions carries out to mission a quality research, efficiency and focus on specific research points. The implementation of policies, plans, budgets. The management to promotion, support instructors,

researchers, personnel to be competent in conducting research, promote and establish research networks with outside institute. To get research results, innovative inventions and quality initiatives are useful for the country's development strategy, can respond the needs of society has a wide range and benefits the public.

- (3) The provision of academic services to the society, Higher education institutions, provide comprehensive academic services. A wide range of goals audiences and specific target groups, both domestic and international, may be provided through shared resources at both institutional and individual levels, such as counseling, research, seeking for answers to society, Service, short-term training, continuing education, services to the public. This service is academic, can be provided in the form of free or commercial services, revenue generating or reverse generated service development and improved to create new knowledge.
- (4) The maintenance of arts and culture, the higher education institutions have maintained national artistic and cultural institutions and institutions. There are systems and mechanisms to promote and encourage art and culture to be part of direct or indirect instructional management, so that learners and academics are cultivated to have knowledge, appreciation, appreciation and aesthetics for the arts and culture of the nation, can be used it is a good maintenance of life and career, there is a life style. Learn how to manage undesirable cultures and lifestyles. Institutional control this operation is of high quality and efficiency in accordance with the goals of the strategic plan. The operation of highways Arts and Culture Institute.
- 1.3) Types or groups of institutions determine under the standards of higher education institutions are divided into 4 groups<sup>3</sup>.

Group A, Community colleges

Group B, Institutions that focus on undergraduate.

Group C, Specialized institutions

Group D, The Institute are focus on advanced research the production of graduate students, especially the doctoral degree.

The higher education institution are each will choose the type or group of institutions according to the philosophy, objectives and mission that it has set. Change

<sup>&</sup>lt;sup>3</sup> Manual for the Internal Quality Assurance for Higher Education Institutions 2014, p.4.

selected groups Institutions will focus on the different standards and sub-standards for group C, group D. in terms of Philosophy, Objective, and mission sect up. Group of Higher Education Institutions Follow the instructions. Attached to this announcement (According to the notification of the Ministry of Education dated February 24, 2011) by each class or group of higher education institutions. The standard set up, by the higher education institution is divided into 4 groups.

**Group A**, Community College means an institution that focuses on the production of undergraduate graduates, providing training to meet the needs of the local community. To prepare people with knowledge into the real manufacturing sector in the community, supportive institutions for changing basic occupations such as workers leaving the agricultural sector. It is a source of learning that encourages people to have lifelong learning opportunities. Strong community and sustainable development.

**Group B,** the institution that focuses on the bachelor degree, is the institution that focuses on the production of bachelor degree. To have a graduate, core competency in driving development and change at the regional level plays a role in strengthening the organization. Businesses and individuals in the region to support living Institutions may also offer graduate studies, especially at the master's level.

Group C, Specialized institutions means institutions that focus on the production of specialized graduates or specialized subjects. Both in physical sciences, Life science, Social science or Humanities Including specialized fields. Institutions may focus on theses or research or focus on the production of graduates with the knowledge, skills and competencies to assemble. Career high or emphasize on both sides. Institutions may also play a role in the development of the manufacturing sector. Industry and Services Institutions in this group may be classified into 2 categories. Type 1 is a graduate institution and type 2 is an institution that focuses on undergraduate.

**Group D**, Institutions that focus on advanced research and produce graduate degrees. Specifically, doctoral degree refers to an institution that focuses on the production of graduate students, especially doctoral degrees, and emphasizes thesis and research, as well as postdoctoral research. The institute focuses on the production of graduates who are thought leaders of the country. Institute has the potential. To drive

That higher education to the international level. To creative for body knowledge. New academic theories and findings.

- 2) Standards of institute management.
- 2.1) Quality management to produce graduates. College / Institute / University, There are more differences, which have damage result for both graduates and the society users overall of the country in short-term and long-term. By providing public information that is beneficial to stakeholders, students, employers, parents, the government, and the general people.
- 2.2) The College / Institute / University, there is a need to ensure that the society, can develops knowledge and produces graduates. To respond to the more country's development strategy, such as capacity building for personnel and organizations or enterprises, and the creation of international competitiveness. The developing of real sector of industry and services, career development, quality of life, community and local life.
- 2.3) Human society needs a higher education system, The opportunity for stakeholders to participate, transparency and accountable responsibilities, can be checked or accountability, is based on good governance. Because in the age of globalization to higher education. On the issue of borderless educational services and transfer of students and graduates. The occupation of current and future graduates. As a result of the integration of ASEAN countries. Which is necessary to set up a quality assurance system and quality assurance mechanism for education.

#### 3) Conclusion

As the governing authority of higher education institutions suggested a system for education quality assurance to the government Cabinet for consideration. The Cabinet approved this system on March 21, 2000. The Ministry announced the required Systems, Regulations, and Methods for Internal Quality Assurance among Higher Education Institutions in 2002. In 2003, the announcement was supported as a ministerial regulation regarding the systems, regulations, and methods for internal quality assurance among higher education institutions (2003). Since then, it has been used as the basis for internal quality assurance practice.

# 2.3 National Qualifications Framework for Higher Education in Thailand Introduction<sup>4</sup>

The Qualifications Framework for Thailand's higher education system is designed to support implementation of the educational guidelines set out in the National Education Act, to ensure consistency in both standards and award titles for higher education qualifications, and to make clear the equivalence of academic awards with those granted by higher education institutions in other parts of the world. The Framework will help to provide appropriate points of comparison in academic standards for institutions in their planning and internal quality assurance processes, for evaluators involved in external reviews, and for employers, in understanding the skills and capabilities of graduates they may employ.

Programs developed within this Framework should not only lead to the knowledge, generic skills and professional expertise normally associated with studies leading to comparable awards throughout the world, but should also include particular emphases reflecting the policy priorities of Thailand. These priorities include emphasis on the transfer and application of cognitive skills in problem solving, creative thinking, and entrepreneurship; familiarity with and support for national culture and traditions; and reconciliation of those traditions with requirements for competitiveness in the international knowledge economy. Graduates should have the ability and commitment to engage in lifelong learning, capacity for effective communication including communication through use of information technology and the ability to take the initiative in individual and group activities.

The framework describes the expected increasing levels of knowledge and skill in these areas for each qualification. Developing these abilities requires use of methods of instruction that take students well beyond the acquisition of knowledge and skills and emphasises their use in practical situations on a continuing basis.

# 2.3.1 Levels of Qualifications

Levels describe the increasing intellectual demand and complexity of learning expected as students progress to higher academic awards. The qualifications framework begins at an entry level which is the successful completion of basic education, and

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<sup>&</sup>lt;sup>4</sup> National Qualifications Framework (Thailand NQF) 2013, p.53.

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culminates with the degree of doctor. Higher doctorates, postdoctoral studies and honorary degrees are described in the Implementation Handbook but are not included in the framework.

The levels in the framework are: Entry. Completion of basic education.

Level 1. Advanced Diploma

Level 2. Bachelor

Level 3. Graduate Diploma

Level 4. Master

Level 5. Higher Graduate Diploma

Level 6. Doctor

Satisfactory completion of studies at any level does not necessarily qualify a person to enter studies at the next level. Entry requirements may be set based on grades or other criteria to ensure that applicants have a reasonable chance of successfully undertaking the more advanced and complex studies leading to a higher qualification.

#### 2.3.2 Credit Points

A system of credit points is used to describe the amount or volume of learning expected for qualifications at each level. Thirty credit points representing the minimum amount of learning normally expected of undergraduate students in one academic year of study. The same system of credit points is used for regulations governing major components of study such as the scale of a thesis requirement, the amount of general studies required in an undergraduate program, and equivalent credits for formal instruction, laboratory work or field work. Details of these requirements are set out in Standard Criteria for Thai Higher Education published by the Commission of Higher Education.

The length of programs (and the number of credit points given) may differ for programs with the same or similar titles. For example a bachelor degree may be four or five (or even six) years in length depending on the amount of learning expected at the level of complexity expected for bachelor degree studies. A similar period of study in different programs could lead to a bachelor and a master degree, but only if the study for the master degree component was taken at the more advanced level required for that

degree. The title is based on the level or complexity of learning rather than the time taken, though there are minimum credit requirements.

# 2.3.3 Domains of Learning

The framework groups the kinds of learning expected of students into five domains and describes learning outcomes at each level in each of these groupings. The domains are:

- 1) Ethical and Moral Development: Development of: -Habits of acting ethically and responsibly in personal and public life in ways that are consistent with high moral standards. -Ability to resolve value conflicts through application of a consistent system of values.
- 2) knowledge, the ability to understand, recall and present information including: -Knowledge of specific facts, -Knowledge of concepts, principles and theories and -Knowledge of procedures.
- 3) cognitive skills, the ability to -Apply knowledge and understanding of concepts, principles, theories and procedures when asked to do so; and -Analyze situations and apply conceptual understanding of principles and theories in critical thinking and creative problem solving when faced with unanticipated new situations.

# 2.3.4 Learning Outcomes in Domains of Learning

Descriptions of learning outcomes at each of the levels of the Framework are provided in Section C of this Handbook. Psychomotor skills have not been described in this section because they are relevant only to some fields of study, and because their nature and the way necessary levels skill are described varies widely.

- 1) The learning outcomes described in Section C are grouped into the five domains, and in each domain there is an increase in the scale or complexity of the learning that is expected. In each case the knowledge and skills are intended to be cumulative, so that the learning at any level includes that of the same domain at earlier levels even if the particular knowledge or skill is not restated.
- 2) Learning outcomes for ethical and moral development are expected to apply at the level described for all learners, though there are also some field specific

items of knowledge that should be known by students in those fields such as codes of ethical practice for medical doctors, accountants, lawyers, etc.

- **2.3.5** Learning outcomes in the domains of knowledge and for cognitive skills are directly related to the field of study undertaken and details of the knowledge and skill appropriate to those fields should be specified in program and course specifications.
- **2.3.6 Learning outcomes for interpersonal skills and responsibility** are intended to apply to all students at the level described regardless of field of study.
- 2.3.7 Learning outcomes for analytical and communication skills are generic descriptions that should apply to all students regardless of field of study. However when the main focus of a student's field of study is in one of these areas a much higher level of performance is expected. For example a student undertaking major studies in IT would be expected to have the levels of expertise in IT described under the headings of Knowledge and Cognitive Skills rather than the more general expectation for everyone described under the heading of Analytical and Communication Skills.

#### 2.3.8 Conclusion

Learning outcomes are direct statements that describe the knowledge, skills, and habits of mind that students are expected to reliably demonstrate after a learning experience. Learning outcomes are described 'as a basic educational building block' and they provide a powerful framework to build a Curriculum / Program. As such they cannot be separated from other parts of the curriculum such as assessment, and instructional strategies. Can help to curriculum:

- 1) To develop effective learning outcomes (at the course and program level)
- 2) To design suitable assessment strategies and determine acceptable evidence of student learning, and
- 3) To plan instructional activities and learning experiences that are likely to ensure the achievement of your identified learning outcomes.

# 2.4 Relationship between Levels, Credits and Domains of Learning

These three components come together in a framework structure as shown in the following table 1....Such as the level and minimum credits:

- 1. Advanced Diploma minimum 90 credits
- 2. Bachelor minimum 120, 150, and 180 credits
- 3. Graduate Diploma minimum 24 credits for after Bachelor
- 4. Master minimum 36 credits
- 5. Higher Graduate Diploma minimum 24 credits for after Master
- 6. Doctor minimum 48 credits for after Master, or 72 credits for after Bachelor

#### 2.4.1 Academic and Professional Strands

The framework has two general strands representing different orientations in programs. One of these is described as academic with a general focus on research and transmission of knowledge in fields that are not directly related to professional occupations. The other is described as professional, and programs in this strand have a more practical orientation to provide students with the high levels of knowledge and skill required for professional occupations.

The two strands are not mutually exclusive. Academic studies should develop abilities that will be of significant value in employment as well as in everyday life. Professional programs should involve thorough understanding of research and theoretical knowledge in their field and in related areas, and develop general thinking and problem solving abilities that are applicable in any context. However there is a difference in emphasis between these two types of programs that should be reflected in their detailed content and in the titles of awards.

### **2.4.2 Field Descriptors**

The terms used for levels, Advanced Diploma, Bachelor, Graduate Diploma, Master, Higher Graduate Diploma, and Doctor, are used to describe the expectations for complexity of learning described in the framework. It is also important that the descriptions of fields in which studies are undertaken be accurately and consistently used. Field descriptors are the terms used to describe the broad area of study (Arts,

Science, Engineering etc.), and in some cases areas of specialization within the field. The term Arts should be used for studies in the humanities or social sciences, the

term Science should be used for studies in natural or applied sciences, including environmental and medical sciences. Academic research degrees in all fields at doctoral level should carry the title of Doctor of Philosophy (PhD). The term Bachelor of Technology may be used at bachelor degree level for multi-disciplinary studies in applied science designed to develop theoretical and practical knowledge relevant to specific industries or professional fields.

More detailed guidelines on degree designations are available in a Commission of Higher Education publication, Nomenclature Rules for Degree Names. The following arrangements should apply.

For the award of a diploma or bachelor or masters degree, where an area of specialization is included with a general qualification title (Eg. B Eng in Information Technology, or B Bus in Accounting), at least 50% of studies should be in that area of specialization.

# 2.4.3 Structure and Normal Progression through the Qualifications

Framework...3

Solid lines indicate normal routes of progression between levels and academic awards. Dotted lines indicate possible routes of progression, but these may involve some additional transitional studies to ensure students have necessary prerequisite knowledge and skill.

# 2.4.4 Issues for Consideration in Implementing the Framework in Higher Education Institutions

### 1) Recognition of Prior Learning

In many cases students will commence higher education studies directly after completion of basic education and will undertake full programs in higher education institutions that are consistent with the levels and credits described in the framework. In other cases students may have developed important skill and knowledge through informal education systems or in employment, or have taken further studies beyond the level of basic education in vocational education or other higher education institutions.

Students should not be required to duplicate learning they have already acquired or repeat work they have already completed satisfactorily elsewhere. They should be

given advanced standing when it can be demonstrated that they have knowledge and skill that are substantially equivalent to the learning outcomes described in the framework, and be permitted to proceed to further studies in a flexible way. On the other hand it is of little benefit to students if they are expected to proceed with studies for which they do not have adequate background. It is also important that where institutions have identified special student attributes that reflect their particular mission and objectives, students admitted with advanced standing have the time required to develop those special attributes.

Institutions should develop processes to evaluate the background of students who might be considered for advanced standing towards academic awards, and provide counselling and guidance for those who are admitted in this way. They should also monitor the performance of these students and adjust the processes and criteria they use in response to their experience.

Subject to these considerations general guidelines have been provided for admission of students seeking advanced standing on admission on the basis of studies in a similar field completed at another vocational education or higher education institution.

These guidelines are set out in Proclamation of the Ministry of University Affairs1 Concerning Principles for Recognition of Prior Learning and Transfer of Course Credits on Entry to the Formal Education Sector. BE 2545/CE 2002

2) Diversity-Recognizing Higher Standards and Special Graduate Attributes

Defining minimum standards in the Qualifications Framework is intended to give students and the wider community confidence in the quality of an academic award, wherever it is earned. However it is not intended to constrain desirable diversity or striving for higher standards of achievement.

Defining minimum standards for academic awards does not limit the achievement of individual students who may learn at a higher standard. Obviously it is important that students achieve at the highest standard they can and the grades given to them should recognize outstanding performance.

It is also important that institutions be able to identify areas of special interest and to define student attributes that are part of their special mission, and that go beyond the minimum requirements. Nothing in the Qualifications Framework should constrain special initiatives of this sort, but despite any variations that may develop the minimum standards described in the domains for each level must be achieved if the community is to have confidence in what the higher education system produces.

## 2.1) Verification of Standards

The Framework provides guidance for staff, students, employers and external quality evaluators about the expected standards of knowledge, skills and personal qualities of students at different qualification levels. However these are necessarily phrased in general terms and require interpretation by experienced people familiar with the field of study concerned and with standards of achievement at other institutions, including at least some good international universities. It is part of the internal quality assurance responsibility of all institutions offering higher education programs to obtain independent verification that the expected standards are understood across the institution, and are being consistently achieved. External evaluators may need to be able to verify that this has been adequately done.

Common strategies used by higher education institutions to verify standards include check marking of student scripts and assignments, external reviews of departments and programs, assessments of programs by students and graduates, and reports on the skills of graduates by employers. The responsibility to verify standards may be partly addressed by particular arrangements made with a partner institution or institutions, but whether this process is adequate will depend on details of the particular arrangements made and the effectiveness with which they are carried out. An arrangement with a partner institution does not remove the responsibility of the teaching institution to verify its standards and ensure they are consistently maintained.

# 2.2) Conditions of Learning

There are significant differences in the way learning occurs in the different domains. For example students memorize information in a different way from the way their attitudes are formed, and they learn to apply cognitive skills in problem solving in a different way again. Very different processes are involved in learning to apply ethical and moral principles in everyday behavior and in improving interpersonal effectiveness and capacity for leadership. Psychomotor skills are developed through repeated practice with feedback on the effectiveness of performance.

This means that if learning outcomes are to be achieved in the different domains of learning, different teaching strategies that are appropriate for those different types of learning must be used. The term "conditions of learning" is used to describe what are generally recognized as the most important requirements for effective teaching in each of the domains.

If the abilities described in the domains of learning are to be developed the necessary conditions of learning for the full range of learning outcomes must be established, and this will require methods of teaching that go well beyond the conventional lecture and classroom discussions that are most commonly used in higher education.

It is an important part of the internal quality assurance of higher education institutions to ensure that the necessary conditions for developing different kinds of learning outcomes are understood by faculty, are applied in courses and programs, and that the effectiveness of those strategies is evaluated on a continuing basis.

The following conditions have been generally supported by research and appear to be necessary.

- (1) For ethical and moral development This involves a combination of knowledge about appropriate behavior and formal and informal codes of practice, attitudes, and maturity of judgment. Development strategies may include exposure to positive role models and analysis and reflection on their own behavior and that of others in a variety of situations. Group discussions of simple and more complex moral dilemmas can help students clarify their own values and think through general principles that they believe should guide their own behavior. The principles of transfer of learning call for discussions of a wide range of possible situations including ones that are similar to those likely to be faced by the students in later life and employment. While special attention to this domain may be given in certain courses, it is important that opportunities are taken in all courses to reinforce and apply the principles developed.
- (2) For acquisition of knowledge--The provision of a broad overview as an advance organizer for the information to be learned. As new information is provided it should be linked to that advance organizer and to students prior knowledge to facilitate understanding and recall. Mnemonic devices may be used to aid recall and periodic

reviews of important information can help to ensure that information is retained in long term memory.

(3) For development of cognitive skills. A planned sequence in the development of concepts and theoretical principles with practice in their use in analyzing situations and solving problems. This practice needs to occur in a variety of settings including ones that are similar to the situations where it is hoped they will be applied in the future, to facilitate transfer and use in different situations when appropriate. Developing capacity to identify and apply cognitive skills in solving new and unanticipated problems requires at least some open ended problem solving tasks, with assistance given in identifying and applying relevant insights.

To improve creative thinking and problem solving capacity students should be assisted to reflect on their own thinking processes as they tackle new and challenging tasks and to improve the management of their own thought strategies as they deal with different types of issues.

(4) For development of interpersonal skills and personal responsibility--

Opportunities to participate in group activities with constructive feedback on performance. This feedback is likely to be most effective if it involves objective analysis by the students of their own behavior in a supportive environment, and the development by them of rules for their own behavior. Development of capacity and responsibility for their own continuing learning requires student assigned work that develops and reinforces these abilities, with expectations for independent work progressively increased during a program.

(5) For development of analytical and communication skills. A planned sequence of instruction that includes practice with feedback and advice on improvement in the necessary skills in simple numerical skills, communication, and use of information and communication technology. Students entering higher education may differ widely in their ability to use analytical and communication skills and some may require special instruction. This may be done through a combination of direct instruction and practice. Assistance should be given in how to improve these skills as expected standards increase at stages through a program.

#### 2.4.5 Other Doctoral Awards

The title of Doctor of Philosophy is used for research based programs at level six regardless on the field of study. Professional doctorates such as Doctor of Business Administration (D.B.A.), Doctor of Education (D.Ed or Ed.D) or Doctor of Engineering (D.Eng) may include a strong research component but are more practically focused and include substantial coursework as well as a thesis or major project.

Universities may offer additional study opportunities beyond doctoral level, and to offer additional awards including the title of doctor for outstanding lifetime achievement or contributions to society. It is important that these practices are carried out in a consistent way. The following arrangements which are consistent with common international practice and should be followed.

## 1) Post Doctoral Studies.

Additional study and research may be undertaken by recent graduates who have completed doctoral studies. This work should be recognized in an official university transcript, but no academic award is granted.

## 2) Additional Doctoral Degrees

It is possible for students to enroll in and complete a second full doctoral program and receive the appropriate academic award for that study. This could be a second Ph.D. Program or a professional doctorate depending on the nature of studies undertaken.

## 3) Higher Doctorates

Higher doctorates are granted in recognition of extensive distinguished research and scholarship over a lengthy period of time, normally at least ten years. Candidates submit evidence in the form of books and other peer reviewed and published research documents and this is evaluated by a senior independent panel of leading authorities in the field who are external to the university. (There is normally an initial screening process within the university) An award might carry the title of Doctor of Letters for work in the liberal arts, or Doctor of Science for science based studies. However more specialized titles designating a particular field of studies might also be used.

## 4) Honorary Doctorates

Honorary doctorates are granted where a university wishes to recognize an outstanding contribution to society by a distinguished member of the community. This

may or may not include contributions to the university granting the award. The titles most commonly used are Doctor of Laws (LLD) or Doctor of Letters (D Letters). As for higher doctorates the title of a specific field may be used where the contribution being recognized is within that field. These awards are granted honoris causa, and that term is used in making the award. Recipients of these awards have the right to use the title, but do not normally do so in general public situations. However the university that makes the award would normally use the title in communications with that person or public functions in which the recipient of the award was involved.

#### 2.4.6 Conclusion

Higher Educational Institutions should develop processes to evaluate the background of students who might be considered for advanced standing towards academic awards, and provide counselling and guidance for those who are admitted in this way. They should also monitor the performance of these students and adjust the processes and criteria they use in response to their experience, to these considerations general guidelines have been provided for admission of students seeking advanced standing on admission on the basis of studies in a similar field completed at another vocational education or higher education institution, by these guidelines are set out in Proclamation of the Ministry of University Affairs1 Concerning Principles for Recognition of Prior Learning and Transfer of Course Credits on Entry to the Formal Education Sector.

# 2.5 Characteristics of Programs and Expected Outcomes in Domains of Learning, Entry Level<sup>5</sup>

The Qualifications Framework is based on an assumption that students entering higher education will have completed a full program of secondary education and have acquired the knowledge and skill to participate effectively in higher education. This assumed background includes competence in the eight broad learning areas described in standards of basic education and the ability to think creatively and apply knowledge and cognitive skills gained from study of relevant disciplines in new situations.

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<sup>&</sup>lt;sup>5</sup> National Qualifications Framework for Higher Education in Thailand Implementation Handbook, 2009, p.13.

Students who have clearly met these requirements may proceed direct to the higher education programs described in the Framework. However in some cases students, particularly those who have not proceeded direct from secondary school, may have gaps in their knowledge and skill and may need to complete foundation studies to ensure they have the necessary language and study skills and the academic background to succeed.

## Expected Learning Outcomes at Entry Level—(Completion of Basic Education)

### 1) Ethical and Moral Development

Understands and appreciates generally accepted Thai values and systems of morality. Acts consistently according to a clearly articulated system of values that balances personal beliefs and values with responsibilities towards family, community, and Thai society. Able to analyze issues where values conflict, reach defensible conclusions, and accept responsibility for decisions made.

## 2) Knowledge

Has a broad understanding of important knowledge and skill in eight general subject fields—Thai language, Mathematics, Science, Social studies religion and culture, Health and physical education, Art, Career and technology, and foreign language including English. More extensive knowledge in selected fields in preparation for further studies in vocational or higher education.

## 3) Cognitive Skills

Understands major concepts, principles and theories in subjects studied and has the ability to apply those insights in analyzing new issues and problems in subject studies and in daily life. Is aware of major issues relating to economic and social development in Thailand and in Thailand's interaction with other countries, and is able to apply insights from studies in analyzing those issues.

#### 4) Interpersonal Skills and Responsibility

Accepts responsibility for own learning and behavior and is able to take initiative and work with some guidance in academic studies and other aspects of personal development. Can be relied upon to work independently and complete assigned tasks with limited supervision. Works effectively towards common goals in group situations.

### 5) Analytical and Communication Skills

Can effectively use information and computer technology and basic mathematical skills in tackling and resolving problems both in educational settings and in work and social environments. Communicates effectively, both verbally and in writing, in Thai language and in English.

## 2.5.1 Level 1 Advanced Diploma

## 1) Characteristics of Programs at Level 1

Advanced diploma programmes in higher education are designed to develop both the knowledge and skills for employment in an administrative or paraprofessional field, and the foundation of theoretical knowledge and research that provides the basis for further studies leading to a bachelors degree. Both these elements are important. An advanced diploma should be a legitimate and useful exit point from studies and be accepted as a qualification for employment in the field concerned. It must also include relevant theoretical knowledge equivalent to that normally acquired in the first three years of study towards a bachelors degree. An advanced diploma may be taken over three years of full time or equivalent part time study. Details of requirements for the awards of different lengths are specified by the Commission on Higher Education. An advanced diploma requires a minimum of 90 credit points.

If students are admitted to a program leading to an advanced diploma with less than the normal entry level skills expected at the end of basic education a longer program may be undertaken to ensure that necessary skills are developed. However in these cases the initial preliminary work is not considered part of higher education, and should be referred to as basic or foundation studies. Credits obtained in these studies do not count towards the credit requirements for the advanced diploma.

#### 2) Characteristics of Graduates at Level 1

Typically holders of an advanced diploma will have demonstrated:

- Knowledge of important facts, principles and theories in their field of study and of regulations and operating procedures relevant to their professional field;
- The ability to apply concepts theories and processes of enquiry to issues and problems related to their area of study and/or employment and develop sound solutions based on that analysis;

- The ability to interpret and evaluate quantitative and qualitative data and present conclusions orally and in writing, making appropriate use of information and communications technology;
- The ability to carry out successfully the responsibilities for employment in the field of activity for which they have been prepared
  - 3) Well educated graduates from an advanced diploma programme should:
- Think and act independently, but also interact constructively in group or team situations in pursuit of common goals;
- Understand the limits of their knowledge and how this affects the analysis and interpretations based on that knowledge, and as a consequence seek advice from appropriate sources when necessary;
  - Take initiative in planning to enhance their knowledge and skill;
- Identify the impact on others of actions taken and evaluate the appropriateness of those actions in the light of sound ethical and moral principles. They accept personal responsibility for actions taken in individual or group situations.
  - 4) Learning Outcomes in Each Domain at Level 1

## 4.1) Ethical and Moral Development

Accepts personal responsibility for actions taken in individual and group situations. Is aware of and acts consistently with relevant regulations and codes of practice, seeking advice when necessary. Can identify the impact on others of actions proposed or taken and evaluate the appropriateness of those actions in the light of their consequences. In situations of potential conflict in values or priorities can make explicit the nature of the conflict and the values and priorities involved and make a defensible judgment on the course of action that should be taken.

## 4.2) Knowledge

Has general knowledge of the scope and defining features of a field of study, and in- depth knowledge of some areas within the field, including important theories, concepts and principles. Is familiar with important current issues and recent research. In programs preparing students for a professional or para-professional occupation, has knowledge of recent developments ion professional practice and of technical requirements and regulations relevant to that professional field.

## 4.3) Cognitive Skills

Can analyze and interpret technical and research information and apply it to practical issues with a minimum of guidance. Is able to investigate defined or routine problems, evaluate alternative solutions, and propose new approaches drawing on relevant theoretical and practical knowledge. Can identify relevant concepts and theories from subjects studied and apply them outside the context in which they were learned, in both academic and employment contexts. Is aware of the provisional nature of knowledge in the field and able to take this into account in analyzing problems and proposing solutions. In professional programs can apply technical and professional knowledge in the analysis and resolution of practical issues with limited guidance, and understand and explain the consequences of decisions made.

## 4.4) Interpersonal Skills and Responsibility

Is able to think and act independently, but interacts constructively in group or team situations in pursuit of common goals. Is able to exercise leadership in a small group in a defined area of responsibility.

Can identify weaknesses in own knowledge and skill and plan for and take action to provide for continuing learning. Analytical and Communication Skills Is able to apply routine statistical and relevant mathematical techniques in investigating and proposing solutions to problems and issues.

#### 4.5) Analytical and Communication Skills

Is able to apply routine statistical and relevant mathematical techniques in investigating and proposing solutions to problems and issues. Communicates effectively, both orally and in writing, presenting arguments, analyses and conclusions succinctly and in correct form. Is able to make effective use of information and communications technology in analyzing issues and obtaining information, and in making presentations.

#### 2.5.2 Level 2 Bachelor

## 1) Characteristics of Program at Level 2

A bachelors degree program is designed to develop a comprehensive understanding of a broad field of study, with some studies taken to considerable depth and involving critical analysis of the latest developments and research. Students should be aware of relevant knowledge and theory in other related fields of learning.

A bachelors degree is the basic qualification for entry to a number of highly skilled professional fields and programs in the professional strand should develop both the knowledge and skill to practice in those professions, and the background in practical and theoretical knowledge and research to proceed to further study. The length of programs varies for different professional fields, with the duration of most being four academic years, and requiring a minimum of 120 credit points. Where longer programs are offered, as they are in certain fields, the level remains the same, but additional credits are given to recognize the greater amount of learning required. A five year program requires a minimum of 150 credit points and a six year program requires 180 credit points.

## 2) Characteristics of Graduates at Level 2

Typically holders of a bachelors degree will have demonstrated:

- Knowledge of a comprehensive, coherent and systematic body of knowledge in a field of enquiry and of the underlying theories and principles associated with it:
- The ability to investigate complex problems and develop creative solutions with limited guidance, using insights from their own and other related fields of study;
- The ability to identify and use appropriate mathematical and statistical techniques in the analysis and resolution of complex issues, and select and use the most appropriate mechanisms for communicating the results to a variety of audiences;
- In the case of a professional program the full range of knowledge and skill required for effective practice in the profession concerned;
- In the case of an academic program not geared to professional practice, in depth knowledge and understanding of research literature in a field, and ability to interpret, analyze and evaluate the significance of that research in extending knowledge in the field.
  - 3) Well educated graduates from a bachelor degree programme should:
- Take initiative in identifying and resolving problems and issues both individually and in group situations exercising leadership in pursuit of innovative and practical solutions;

- Apply the theoretical insights and methods of inquiry from their field of study in considering issues and problems in other contexts;
- Recognize the provisional nature of knowledge in their field and take this into account in investigating and proposing solutions to academic or professional issues;
- Participate in activities to keep up to date with developments in their field and enhance their own knowledge and understanding;
- Consistently demonstrate a high level of ethical and responsible behavior in academic, professional and community environments
  - 4) Learning Outcomes in Each Domain at Level 2

## 4.1) Ethical and Moral Development

Deals with ethical and professional issues involving values and moral judgments in ways that are sensitive to others and consistent with underlying basic values and relevant professional codes of practice. Demonstrates a high level of ethical behaviour in situations involving value conflicts and competing priorities. Consistently demonstrates honesty and integrity with an appropriate balance of personal and group goals and objectives. Provides a positive influence to others through example and leadership in employment or other group situations in family and community.

#### 4.2) Knowledge

Has possession of a comprehensive, coherent and systematic body of knowledge in a field and the underlying principles and theories associated with it. Is aware of related knowledge and theory in other disciplines and, in the case of professional programs, other professional fields. Is familiar with the latest developments at the forefront of specializations within the main field of study including critical awareness of current research relating to resolution of issues and extension of knowledge. In programs preparing students for professional practice students is aware of relevant conventions, regulations, and technical requirements and of how these may be modified over time in response to changing circumstances.

## 4.3) Cognitive Skills

Is able to carry out investigations, comprehend and evaluate new information, concepts and evidence from a range of sources, and apply conclusions to a wide range of issues and problems without external guidance. Is able to investigate

complex problems and recommend creative and innovative solutions taking account of relevant theoretical knowledge and practical experience and the consequences of decisions made. Can apply these skills and insights in professional and academic contexts relevant to the field of study undertaken. In professional programs can use routine procedures appropriately, but identify situations requiring innovative solutions and draw on relevant theoretical and practical insights in response..

## 4.3) Interpersonal Skills and Responsibility

Contributes to and facilitates constructive resolution of issues in group or team situations, whether in a leadership role or as a member of a group. Can exercise group leadership in undefined situations calling for innovative responses. Accepts personal responsibility for actions undertaken and shares responsibility as a member of a group. Shows initiative in identifying issues requiring attention in both personal and social situations and in addressing them appropriately on an individual or team basis. Accepts responsibility for own continuing learning and personal and professional development.

## 4.5) Analytical and Communication Skills

When investigating issues and problems can identify relevant statistical or mathematical techniques and apply them creatively in interpreting information and proposing solutions. Can communicate effectively both orally and in writing, selecting and using forms of presentation appropriate for differing issues and audiences.

Routinely uses the most appropriate information and communications technology in gathering, interpreting and communicating information and ideas.

## 2.5.3 Level 3 Graduate Diploma

#### 1) Characteristics of Programs at Level 3

A Graduate Diploma involves a minimum of 24 credit points and is normally taken over a period of one academic year or equivalent part time period of study. The programs are intended to provide advanced academic and professional studies beyond the level of a bachelors degree for students who want to improve professional skill and knowledge but do not meet entry requirements, or do not wish to undertake the research or major project work required for a Masters degree.

Although intended as a final qualification, students completing a Graduate Diploma may proceed to further study at Masters level, but may be required to complete additional theoretical or applied studies before doing so.

2) Characteristics of Graduates at Level 3

Typically holders of a graduate diploma will have demonstrated:

- Advanced knowledge of theory or professional practice, and substantial experience in an academic or professional field;
- The ability to apply that theory and practice creatively in planning and research drawing on a wide range of relevant insights within and outside their specific field of study;
- The ability to select from and use a wide range of mathematical and other analytical techniques in investigating and reporting on issues and proposing new initiatives, making effective use of oral, written and electronic forms of communication for academic, professional and community audiences;
- A very high level of professional competence in carrying out responsibilities in professional practice or employment.
  - 3) Well educated graduates from a graduate diploma programme should:
- Draw on a wide range of theoretical and practical knowledge both within and outside their specialized field in addressing new issues and problems;
- Exercise effective leadership in initiating action to address significant issues in the work or community environment in ways that are sensitive to others and consistent with basic values and ethical principles;
- Provide a positive influence to others through example and leadership in professional and community life;
- Participate in and assist in planning initiatives for others to keep up to date with new developments in their field;
  - 4) Learning Outcomes in Each Domain at Level 3
    - 4.1) Ethical and Moral Development

Deals with ethical and professional issues involving values and moral judgments in ways that are sensitive to others and consistent with underlying basic values and relevant professional codes of practice. Demonstrates a high level of ethical behavior in situations involving value conflicts and competing priorities. Consistently

demonstrates honesty and integrity with an appropriate balance of personal and group goals and objectives. Provides a positive influence to others through example and leadership in employment or other group situations in family and community.

## 4.2) Knowledge

Has advanced knowledge of theory and practice in an academic or professional field, and of related knowledge in other fields that are relevant to an area of specialization. Knows about current research and innovations in professional practice and the impact of these developments on accepted theory and practice.

## 4.3) Cognitive Skills

Is able to apply theoretical knowledge and practical experience in investigating complex issues and problems, identifying additional sources of information or analytical techniques as required. Takes full account of differing circumstances in analyses of issues, forming conclusions and proposing solutions to problems or strategies for action.

### 4.4) Interpersonal Skills and Responsibility

Works effectively on an individual basis or in a team situation in a wide range of circumstances including new situations and ones requiring high levels of tact and sensitivity. Acts responsibly in employment or other professional situations, accepting high levels of responsibility. Takes responsibility for developing new skills and knowledge required both for current tasks, and for further development of abilities and skills.

#### 4.5) Analytical and Communication Skills

Can draw upon and appropriately apply a wide range of analytical techniques and use them intelligently in investigating and reporting on issues and problems. Communicates effectively in oral and written modes and using electronic communications technology. Routinely evaluates the success of communications to different audiences and takes action to improve effectiveness when required.

#### 2.5.4 Level 4 Master

## 1) Characteristics of Programs at Level 4

Master degrees are designed to provide very advanced academic and professional knowledge and skill for students who have completed a Bachelors degree with a high level of achievement, normally a GPA of 3.0 or better. Master degrees are conducted over a minimum of one academic year, and require a minimum of 36 credit points. Academic degrees aimed at developing research expertise may be completed through an extended thesis on a topic that requires application of advanced theoretical understanding and adds to knowledge in a field, or through a combination of a less sophisticated thesis and advanced coursework for between 12 and 24 credits.

Master degrees aimed at advanced professional expertise may involve a significant independent project applying learning gained to issues or problems in their field, together with advanced coursework. Research master degrees based on a thesis are normally awarded with the title of MA or MSc. Professional master degrees based on advanced coursework or coursework and major project are normally awarded with the title of M Bus, MBA, M Ed, M Eng or other field descriptor for the professional field concerned.

#### 2) Characteristics of Graduates at Level 4

Typically holders of a masters degree will have demonstrated:

- Thorough understanding of theory, research and recent developments at the forefront of an academic discipline or field of professional practice and of the implications of those developments for the store of knowledge in the field;
- Familiarity with and ability to use advanced techniques of research and inquiry applicable to the field of scholarship or professional practice, and will have use those techniques in carrying out a significant research or professional project;
- Ability to synthesize and apply the results of research and new developments in professional practice, in analyzing, developing and testing hypotheses, and proposing solutions to theoretical and practical problems;
- Ability to communicate the results of advanced study and research through refereed publications to academic, professional and community audiences.
  - 3) Well educated graduates from a master degree programme should:
- Consistently respond to complex academic and professional issues, providing creative solutions and making sound judgments, exercising these skills when necessary in the absence of complete data relevant to the matter concerned;

- Act autonomously in tackling and solving both anticipated and unpredictable problems, and cooperate with others and provide leadership when appropriate in group situations;
- Follow, and actively encourage others to apply, sound ethical and moral judgments in dealing with sensitive and complex issues that may involve difficult value conflicts:
- Take full responsibility for their own independent learning, and provide leadership in developing opportunities to support the continuing professional development of others.

## 4) Learning Outcomes in Each Domain at Level 4

## 4.1) Ethical and Moral Development

Deals consistently and sensitively with complex ethical issues in academic and or professional contexts. Where issues are not adequately dealt with in current ethical codes of practice or regulations, makes informed, fair, and valid judgments, and responds on the basis of sound principles and values, and acts or communicates conclusions in ways that are fully sensitive to the concerns those affected. Takes initiative in raising deficiencies in existing codes of practice for possible review and amendment. Actively encourages others to apply sound ethical and moral judgments in dealing with issues and problems affecting themselves and others and exercises leadership in promoting sound ethical and moral practices in the work environment and the wider community.

#### 4.2) Knowledge

Has thorough knowledge and critical understanding of the main areas of a subject or discipline including principal concepts, principles and theories and their current application to a specialist field of academic inquiry or professional practice. Has detailed understanding of one or more complex areas of specialization at the forefront of theory, research or professional practice in that field. Understands how new knowledge is developed and applied and the effects of recent research on the store of knowledge in the field and on associated professional practice. Is aware of recent regulatory provisions in the local and international environment that might affect the professional field concerned and of reasons for and future implications of those changes.

## 4.3) Cognitive Skills

Consistently applies practical and theoretical knowledge in dealing with a wide variety of novel and unpredictable scholarly and/or professional contexts, and develops original and creative responses to issues and problems. Makes informed and defensible judgments in circumstances where there is an absence of complete or consistent information. Can synthesize and apply research and scholarly publications or professional reports, and develop significant new ideas and integrate them into or challenge established knowledge. Can apply common and specialized research techniques in the creative analysis of complex issues and development of conclusions and proposals relevant to an academic or professional field. Can independently plan and execute a major project or piece of scholarly research applying practical and theoretical knowledge and research techniques and producing sound conclusions that add significantly to existing knowledge or professional practice.

#### 4.4) Interpersonal Skills and Responsibility

Takes initiative in identifying and responding creatively to complex issues and problems in an academic or professional context. Where additional information or skills are required takes independent action to acquire and apply that information or skill. Accepts full responsibility for own work and cooperates fully and constructively with others in dealing with issues and problems, exercising both informal and formal leadership skills where appropriate. In group situations acts in ways that consistently enhance the effectiveness of the group as a whole.

#### 4.5) Analytical and Communication Skills

Communicates effectively and at appropriate levels with academic and professional audiences and the wider community through informal and formal reports and presentations and academic and professional publications, including a thesis or major project report. Obtains, critically evaluates, and makes effective use of mathematical and statistical data, and uses a wide range of appropriate information and communications technology in investigating issues and in communicating conclusions and recommendations.

## 2.5.5. Level 5 Higher Graduate Diploma

1) Characteristics of Programmes at Level 5

A higher graduate diploma is an advanced professional qualification provided in a limited number of specialized fields that require professional studies between the levels of master and doctor. It is used primarily in medicine and related studies such as pharmacy and other medical sciences. Students must have completed a masters degree prior to admission and the programs require a minimum of 24 credit points in advanced professional studies.

#### 2) Characteristics of Graduates at Level 5

Holders of a higher graduate diploma will have demonstrated all the knowledge and skills, and the behavioral characteristics expected of those with masters degrees in their field, and also:

- Thorough knowledge and understanding of the latest developments in research and professional practice in their field, and in other related fields that potentially impact on their professional responsibilities;
- The ability to apply that knowledge creatively in the resolution of complex issues, and to identify and work cooperatively with others in related fields in finding the best possible solution to major problems.
  - 3) Well educated graduates from a higher graduate diploma should:
- Consistently apply the latest available knowledge and research insights in analyzing and resolving problems in their field of specialization.
- Cooperate with others within and outside their special field as appropriate in dealing with problems and issues, but take personal responsibility for decisions made and advice provided.
- Participate fully in individual and group activities designed to maintain and extend their professional knowledge and experience and provide leadership and support for the continuing professional development of colleagues in their field.
- Follow, and actively encourage others to apply, sound ethical and moral judgments in dealing with sensitive and complex issues that may involve value conflicts.

## 4) Learning Outcomes in Each Domain at Level 5

## 4.1) Ethical and Moral Development

Deals consistently and sensitively with complex ethical issues in academic and or professional contexts. Where issues are not adequately dealt with in

current ethical codes of practice or regulations, makes informed, fair, and valid judgments, and responds on the basis of sound principles and values, and acts or communicates conclusions in ways that are fully sensitive to the concerns those affected. Takes initiative in raising deficiencies in existing codes of practice for possible review and amendment. Actively encourages others to apply sound ethical and moral judgments in dealing with issues and problems affecting themselves and others and exercises leadership in promoting sound ethical and moral practices in the work environment and the wider community.

## 4.2) Knowledge

Has thorough and up to date knowledge of local and international developments in the field of specialization, and of developments in related fields that have potential impact on that specialization. Is aware of current research activity and of emerging theories and of the extent to which those ideas have been validated and can be relied upon in making professional decisions. Has thorough knowledge and understanding of regulations and of relevant codes of professional conduct affecting practice in the field.

## 4.3) Cognitive Skills

Can analyse new and complex situations and apply the latest research and practical knowledge in developing and applying the most appropriate solution in each case. Can initiate and carry out more intensive analyses of complex problems, drawing on and evaluating additional sources of expert advice when appropriate. Can monitor the results of action taken and interpret and when appropriate generalize from those results in ways that contribute to improvements in professional practice.

Consistently uses these skills when relevant in the conduct of professional activities.

#### 4.4) Interpersonal Skills and Responsibility

Acts consistently with a high level of autonomy and initiative in professional activities in the field of specialization. Takes full responsibility for own activities, and evaluates and works to improve personal effectiveness through objective feedback and constructive planning for improvement. Deals with clients and colleagues in ways that contribute to their personal and professional development. Facilitates constructive interaction in group activities and exercises effective leadership in complex professional and social environments.

### 4.5) Analytical and Communication Skills

Communicates effectively and at appropriate levels with academic and professional audiences and the wider community through informal and formal reports and presentations and professional publications. Obtains, critically evaluates, and makes effective use of mathematical and statistical data, and uses a wide range of appropriate information and communications technology in investigating issues in the field of specialization and in communicating conclusions and recommendations appropriately to different audiences in the professional field and in the wider community.

#### 2.5.6 Level 6 Doctor

#### 1) Characteristics of Program at Level 6

Doctoral programs involve substantial advanced independent scholarship, mastery of the most recent developments in a major field of inquiry, and the creation, interpretation and application of knowledge in a way that adds significantly to the development of a subject, discipline or professional field. Programs may focus on independent research that results in a thesis that adds to existing knowledge, or involve a combination of advanced coursework and thesis in a professional or applied field.

Studies for a doctoral degree normally require a minimum of 48 credit points over two full time academic years or equivalent following a Masters degree or 72 credit points over three years after a Bachelors degree. Research masters doctorates based on a thesis are normally awarded with the title of Ph.D. Professional doctorates based on advanced coursework and major project or thesis are normally awarded with the title of D.B.A., D.Ed, D.Eng. or other field descriptor appropriate for the professional field concerned.

## 2) Characteristics of Graduates at Level 6

Typically holders of a doctors degree will have demonstrated:

- Thorough understanding of a substantial body of advanced knowledge and research in an academic or professional field.
- Familiarity with emerging issues at the forefront of the discipline or professional field and with the potential challenges of those issues for existing practice and generally accepted conclusions.

- Advanced scholarship involving the synthesis of theory and research in related fields and the creation and interpretation of new knowledge through original research, or the application of theory and research in a major contribution to professional practice;
- Thorough understanding of research techniques applicable to the field of study involved;
- Ability to document the results of research undertaken in a major thesis or project report and in refereed academic or professional publications.
  - 3) Well educated graduates from a doctor degree should:
- Consistently apply their advanced knowledge and/or professional understanding to the further development of knowledge and practice in their field, contributing significantly to the development of new insights and strategies;
- Provide effective leadership in their field addressing significant emerging issues and communicating their ideas and conclusions effectively to specialist and non-specialist audiences;
- Deal consistently and sensitively with complex ethical issues in academic or professional contexts and take initiative in ensuring appropriate resolution of wider issues affecting the community;
  - 4) Learning Outcomes in Each Domain at Level 6
    - 4.1) Ethical and Moral Development

Deals consistently and sensitively with complex ethical issues in academic and or professional contexts. Where issues are not adequately dealt with in current ethical codes of practice or regulations, makes informed, fair, and valid judgments, and responds on the basis of sound principles and values, and acts or communicates conclusions in ways that are fully sensitive to the concerns those affected. Takes initiative in raising deficiencies in existing codes of practice for possible review and amendment. Actively encourages others to apply sound ethical and moral judgments in dealing with issues and problems affecting themselves and others and exercises leadership in promoting sound ethical and moral practices in the work environment and the wider community.

## 4.2) Knowledge

Has thorough understanding of a substantial body of knowledge in a discipline or professional field, including both specific information and underlying theories, principles and concepts. Knows about the latest developments in the field including emerging issues and research techniques and the potential challenges in developments for generally accepted conclusions. For doctoral studies in a professional field, has thorough and extensive knowledge of changing practices within Thailand and in other countries. Has thorough knowledge of developments in related fields that potentially impact on the area of inquiry.

## 4.3) Cognitive Skills

Is able to apply advanced theoretical insights and techniques of inquiry in the creative analysis of major issues and problems and development of innovative solutions. Can synthesize research and theoretical writings and develop new and creative insights based on the integration of ideas from within and outside the special field of advanced study. Can design and carry out major research or development projects to deal with complex issues involving development of new knowledge or significant improvements in professional practice.

### 4.4) Interpersonal Skills and Responsibility

Acts consistently with a high level of autonomy and initiative in professional or scholarly activities. Takes full responsibility for own activities, and evaluates and works to improve personal effectiveness through objective feedback and constructive planning for improvement. Facilitates constructive interaction in group activities and exercises effective leadership in complex professional and social environments.

### 4.5) Analytical and Communication Skills

Communicates effectively and at appropriate levels with academic and professional audiences and the wider community through informal and formal reports and presentations and academic and professional publications, including a major thesis or project report on a complex and significant issue. Routinely evaluates and makes effective use of mathematical and statistical data, and uses a wide range of appropriate information and communications technology in investigating issues and in communicating concerned.

## 2.5.7 Conclusion

The characteristics of curriculum / programs as very important and have acquired the knowledge and skill to participate effectively in higher education. This assumed background includes competence in the eight broad learning areas described in standards of basic education and the ability to think creatively and apply knowledge and cognitive skills gained from study of relevant disciplines in new situations. Students who have clearly met these requirements may proceed direct to the higher education programs described in the Framework. However in some cases students, particularly those who have not proceeded direct from secondary school, may have gaps in their knowledge and skill and may need to complete foundation studies to ensure they have the necessary language and study skills and the academic background to succeed.

## 2.6 Thailand Qualifications Framework (TQF)<sup>6</sup>

## 2.6.1 TQF 1 Qualification Standard Level Program/Field of Study

The Qualification Standard of Program/Field of Study here in refers to the framework that is used to scope learning outcome standard of graduates in each level of a program/field of study. This includes the desired characteristics of graduates in each program/fields of study and essential course content that should exist in the programs/fields of study. This is to ensure that graduates of the same degree level and program from different education institutions will have the equivalent minimum learning outcome as specified in the framework. Additionally, with this framework, education institutions can allow the inclusion of some courses, apart from the required courses, that can serve their students' needs or support the uniqueness of each institution. By this process, higher education institutions will be able to develop the curriculum more extensively with the equivalent of learning outcome standard of the same level and program.

Furthermore, the Qualification Standard of Program/Field of Study specifies the conditions and suggestions for higher education institutions to implement teaching and learning management. This is to ensure that all programs can accomplish the

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<sup>&</sup>lt;sup>6</sup> National Qualifications Framework for Higher Education in Thailand Implementation, 2009, p.27-59.

expected learning outcome standard. The Office of Higher Education asked experts to design Form TQF 1 in accordance with an Announcement of the Ministry of Education on the Thai Qualification Framework for Higher Education, B.E 2552.

When the Higher Education Commission deems as appropriate the qualification standard of a proposed program/field of study, the Commission will propose the program qualification standard to the Minister of Education. The Higher Education Commission will announce this program as a standard for further development of the new program or improvement of the program, as explained in Form TQF 2: (Program Qualification).

## 1) Revision of Learning Outcome Standard:

Higher Education Institutions must have a revision system to confirm that all graduates have achieved all domains of expected learning outcome standards as specified in the Qualification Standard of Level: Program/Field of Study: The revision can be done at the course and program levels in terms of both theory and practicum. Once the revision is completed, the revision report must be recorded as a reference of qualification standard achievement

## 2) Publicity of Qualified Program:

under the Thai Qualification Framework for Higher Education as recorded in the Thai Qualifications Register (TQR) To support the education quality management duty of the Higher Education Institutions Council, certify education qualification for the salary rate of the Office of Civil Service Commission, accredit degrees for job or studying abroad purpose, and provide information to employers and stakeholders, the Higher Education Institutions Council should publicize the qualified program according to the Thai Qualification Framework for Higher Education as recorded in TQR after the program has run for at least half of the entire program duration with the following criteria.

- 2.1) The program must be approved by the Higher Education Institutions Council before the commencement of the course, and the Office of Higher Education must be notified within 30 days after the approval date.
- 2.2) The result of the internal quality assurance, as indicators described in the program specification, must be at 'good' level for two consecutive years after the program opens under the Thai Qualification Framework. The result of an evaluation

must follow the above criteria so that it may be publicized, except in the case of a program that has a special program specification standard, indicators and evaluation criteria. In the event that half of the program duration is less than one year, the result of the internal evaluation of first year teaching must be considered with the same criteria.

- 2.3) For programs that are not publicized, education institutions must improve those programs according to the conditions suggested by the Office of Higher Education Commission.
- 2.4) In case of publicized programs, education institutions must maintain the standard of the average score result from internal quality assurance evaluation at least at 'good' level, or must conform to the program qualification standard every year after the publicity. In case an institution cannot maintain the evaluation score result, the Office of Higher Education Commission will propose to the Higher Education Commission to withdraw the program until there are improvements according to the conditions suggested by the Higher Education Commission.

## 2.6.2 TQF 2 Program Specification

The Program Specification herein refers to the explanation of the overall program management and teaching and learning management that will help students achieve the program's learning outcome as specified in the Thai Qualification Framework of Higher Education and Qualification Standard for programs. Each institution may add extra courses apart from the required courses to serve the institution's need and support the institution's uniqueness. As such, program lecturers must cooperate in designing and planning the Program Specification.

The Program Specification will help students to understand what courses they will study, teaching methodology, learning methods, and assessment methods, which can ensure that they will accomplish the expected learning outcome as specified in the learning outcome standard. In addition, the Program Specification will show the relationship of the program and learning composition as described in the Qualification Level. The Program Specification will help students choose the most suitable program that matches their needs, and it can be used as a guideline for employers to recruit new graduates.

## The Program Specification consists of 8 sections:

Section 1 General Information

- Section 2 Program Identification
- Section 3 Education System Management, Operation, Program Structure
- Section 4 Learning Outcomes, Teaching Methodology and Assessment
- Section 5 Students' Assessment Criteria
- Section 6 Faculty Development
- Section 7 Program Quality Assurance
- Section 8 Program Evaluation and Improvement

## **2.6.3 TQF 3 Course Specification**

The Course Specification herein refers to the information guideline of each course management in order to support teaching and learning management as planned in the Program Specification. Each course will describe its objectives, content details, skills training guidelines, and other skills that students may need to achieve course objectives. In addition, the duration of study, learning and teaching methods, textbooks, other related media, evaluation strategies, and improvement processes will be presented as well

## The Course Program Specification consists of 7 sections:

- Section 1 General Information
- Section 2 Aims and Objectives
- Section 3 Operation
- Section 4 Students Learning Outcome Development
- Section 5 Teaching Plan and Assessment
- Section 6 Resources for Learning and Teaching
- Section 7 Course Evaluation and Course Improvement

## 2.6.4 TQF 4 Field Experience Specification

The Field Experience Specification herein includes information about the management of student activities in the course which can be, for example, internship, field trip, or collaborative education. These activities must be planned in accordance with the program specification. The field experience specification also describes the objectives and details of the activities, knowledge training for students, processes and methods of training students in specific skills, criteria and assessment, and field experience report.

## The Field Experience Specification consists of 7 sections:

- Section 1 General Information
- Section 2 Aims and Objectives
- Section 3 Development of Students' Learning Outcome
- Section 4 Course Characteristics and Implementation
- Section 5 Planning and Preparation
- Section 6 Student Assessment
- Section 7 Field Experiences Evaluation and Improvement

## 2.6.5 TQF 5 Course Report

The Course Report herein refers to the teaching and learning report of a lecturer at the end of each semester course. The report includes an assessment whether the course was conducted as planned in the course specification and, if not, suggestions for improvement. The report also presents student academic results, the number of students for the duration of the course, course management problems, an analysis of the course evaluation result from students/Head of Department or external auditor, an opinion survey of employers, and suggestions to the course coordinator for improvement and development.

## The Course Report consists of 6 sections:

- Section 1 General Information
- Section 2 Teaching, Learning Management Compared to Teaching Plan
- Section 3 Summary of Teaching and Learning Result
- Section 4 Problems and Effects of Course Management
- Section 5 Course Evaluation
- Section 6 Improvement Plan

## 2.6.6 TQF 6 Field Experience Report

The Field Experience Report herein refers to the report of students' internship, field trip or collaboration education whether they have achieved the objectives as specified in the field experience specification. If not, suggestions to improve the next internship, field trip and collaboration education should be given. This report includes information about field experience from the beginning to the end,

problems and facilities management, evaluation result analysis, student training, responsible lecturers, and field supervisors.

## The Field Experience Report consists of 6 sections:

Section 1 General Information

Section 2 Implementation that Differs from Field Experience Plan

Section 3 Result

Section 4 Problems and Management Impact

Section 5 Field Experience Evaluation

Section 6 Improvement Plan

## 2.6.7 TQF 7 Program Report

The Program Report herein refers to the annual program report by a program coordinator or responsible staff about the result of the program which includes the statistical record of students who enroll in the program, internal and external environments that effect program management, the overall summary of course report, teaching efficiency according to domains of learning outcomes, comparison of program result with other standards, summary of evaluation from graduates and employers, suggestion for further planning and development, and operational plan to develop faculty staff. This report will be submitted to the Head of Department/Dean, and it will be employed to constantly develop the program and support an external audit.

## **Assessment Reports consists of 8 sections:**

Section 1 General Information

Section 2 Faculty Members

Section 3 Student6s and Graduates

Section 4 Summary of Course Teaching Quality in Program of Studies

Section 5 Curriculum Management

Section 6 Comments and Suggestions Regarding Program Quality from External Assessors

Section 7 Changes Affecting the Program

Section 8 Program of Studies Improvement Plan

#### 2.6.8 Conclusion

Higher Education Institutions must have a revision system to confirm that all graduates have achieved all domains of expected learning outcome standards as specified in the Qualification Standard of Level. Because of the Qualification Standard of Program/Field of Study herein refers to the framework that is used to scope learning outcome standard of graduates in each level of a program/field of study. This includes the desired characteristics of graduates in each program/fields of study and essential course content that should exist in the programs/fields of study. This is to ensure that graduates of the same degree level and program from different education institutions will have the equivalent minimum learning outcome as specified in the framework. Additionally, with this framework, education institutions can allow the inclusion of some courses, apart from the required courses, that can serve their students' needs or support the uniqueness of each institution. By this process, higher education institutions will be able to develop the curriculum more extensively with the equivalent of learning outcome standard of the same level and program. The revision can be done at the course and program levels in terms of both theory and practicum. Once the revision is completed, the revision report must be recorded as a reference of qualification standard achievement

## 2.7 Principle of Buddha-Dharma and related theories.

## 2.7.1 the document about Four Iddhipadas as follows:

## 1) Method to grow of Four Iddhipadas<sup>7</sup>

Four Iddhipadas for your success, your success, the way of success, or Four Idddhipadas, path of accomplishment basis for success.

**Chanda**: will; zeal; aspiration is satisfied, love, joy in that thing. Is a charitable meaning that means love, work, love in the work that is done.

**Viriya**: energy; effort; exertion; is perseverance, effort in thing that.

**Citta**: thoughtfulness; active thought; dedication, attention to that interest.

<sup>&</sup>lt;sup>7</sup> Tripitaka, Volume 35, Phra Aphitham Pitaka, Volume 2, Section of the Buddhist Scripture, Section 508.

**Vimamsa**: investigation; examination; reasoning; considering the persistence and scrutiny of the search results.

This 4 Dharma are related and each their own specific duties as a result, supporting each other, that is, when Iddhipada to happy, love in the work, Inevitably cause perseverance effort in that job, when perseverance arises, therefore must be born with consciousness, attention or attention to that, when practicing consciousness, he would look at it or look at it in an attempt to find a result or wisdom. It is a wonderful virtue that encourages success in various tasks or tasks. He therefore said that is the base of success, which the following factors Is a supporting device or element in the growth of Four Iddhipadas, which will not drop off too much, don't be too supportive, don't depressed in the interior, don't distracted in the outside.

Four Idddhipadas which virtue an important principle in dharma practice to achieve the purpose, to comment as follows;

Tripitaka, Volume 35, Phra Aphitham Pitaka, Volume 2, Section of the Buddhist Scripture, Section 508, Commented on the following comment

The word "It" is "Success", "Success", "Success", "Success", "Goodness", "Success", "Goodness", "Accuracy", "Act" Access to those dharma The word "Ithi" is "Watha Khan Khan", the word "prosperous" is that it is very prosperous, so it is called the prosperous baht. Pasath Kampon, Paragraph 2, Pupsa Formula.

All monks, we have this idea that Monks in this discipline surely prosperous baht which consists of meditation and meditation. Our sea is not too weak. Don't be too supportive. Not depressed in the interior Not distracted in the outside and she is important in the background and in the foreground that as before behind me behind the scenes before me as far as so above as above so below, so by day, even as the night, so also by night. She has an open heart Nothing wrapped Training the mind to be bright.

Buddhist monks are prosperous in the form of meditation, meditation and meditation. Our persistence does not diminish too much. Don't be too supportive. Not depressed in the interior Not distracted in the outside and she is important in the background and in the foreground that as before behind me behind the scenes before me as far as so above as above so below so by day, even as the night, so also by night She has an open heart Nothing wrapped Training the mind to be bright.

## 2) The Four Qualities for Accomplishment: Iddhipada<sup>8</sup>

According to one of the Buddha's teachings, whatever we would like to accomplish in life; work, education, relationship, travel or Enlightenment, we need to have the right ingredients; will power, effort, focus and self-examination.

## (1) Will Power: the Main Ingredient

Will power may be called a strong desire to achieve our goals.

If we want to be successful in our work, we must have a very strong 'passion' for the job. Towards graduation, students must maintain their ambition to study hard.

To have 'roses on the bed' relationship (not the other way around), partners must make a solid-mountain resolution to take all challenges in life together.

To attain Enlightenment and to be free from unsatisfactoriness in life, people must keep their interest in the Dhamma practice. There are two important factors to generate will power; the external and internal factors. The external factor is 'good friend'. In Buddhist teachings, a good friend is a priority. The Buddha asked other monks to consider him as a good friend. A good friend doesn't mean the one who loves to flatter or speak nicely to us all the time. But he or she can be very direct to us whenever we start to lose the path towards inner peace.

- Good friends will remind us when we forget to meditate each day. Good friends will discourage us when we are tempted by the Monster-Discount- Summer Sale in David Jones.
- Good friends will discourage us from having another drink when we start to sing some strange songs and can't walk on the straight line. A good friend can be an inspiring example of a peaceful lifestyle. Buddhist teachings consider 'association with the wise' as one of the highest blessings in life.

Homo Sapiens species is at the top of the animal kingdom, we have survived climate change and many disastrous world phenomena due to our will power to adapt and to evolve. We love to communicate among the same species; we love to exchange

<sup>8</sup> The Four Qualities for Accomplishment : Iddhipada, 25 September 2018, https://www.sunnataram.org/dhamma-teachings/summary-teachings/the – four – qualities - of-accomplishment-iddipata

ideas and tips in every minute detail of living; from making stone tools, casting bronze axes, hunting mammoths, cooking Chinese food, to digital face book.

In general, parents are good friends. Your 'bossy' husband can be a good friend. Your 'nagging' wife is also a good friend. Your annoying roadside authorities can be good friends who discourage you when you park your car in the wrong spot (and they are so happy to fine you.)

Even the doctrine of heaven and hell can be used to encourage people to do good and stop people doing bad. The right application of reward & punishment can inspire some people to have will power. Some young gentlemen may like to work much harder if there are some nice girls working around them. Some boys may like to study much harder because parents promise them the latest apple smart phone. Some actresses try to perform their best and expect an Oscar.

The internal factor is our own joy and happiness. Joy and happiness are the key elements for self-inspiration.

Joy comes from the feeling of success. For example, we are overweight and would like to be healthy, and we have been dreaming of evening jogging for many years. Suddenly, only god knows how or why, on one auspicious morning we went jogging. We feel joy and happy even though it is only the first day of exercise and we are still overweight.

The day-one joy and happy feelings will inspire the day two jogging, and happiness of the day two exercise will encourage day three and so on.

In the March 2015 weekend meditation retreats, there were about 24 new people. Many of them might feel it quite difficult to master their mind. Some might be able to quiet their minds and feel peaceful.

In both cases, the tiny glimpse of inner peace arising from meditation will be self-inspiration for their future meditation practice. The Buddha said 'the taste of inner peace excels all other tastes in this world'. The single experience of inner happiness from one meditation will give one of the strongest positive impressions to the human mind. Because it is really nice. And this is the internal way to create 'will power'.

## (2) Effort: Make the right use of our energy

Effort is to put our plan into action. Buddhism is based on energetic actions; action to correct our mistakes, action to prevent wrong deeds, action to better

our conduct and action to maintain good practice. Effort synchronizes will power. If our interest in practising meditation is not serious, our effort to practise mindful meditation will be less. Oppositely, if the resolution is so high, effort will be like a power house. People are lazy or feel reluctant to practice meditation, not because they don't want to try, but they are not interested enough to do it. To be mindful in all activities during the weekend meditation retreat is not an easy job. Some people quit before the retreat ends. Most people diligently keep on trying to follow the time table; waking up early in the morning, sitting meditation for an hour, walking meditation in the bush etc. It is possible only because of their strong will power. People who practise meditation or exercise regularly without being told by someone else, are the ones who already have had the benefits.

The relaxed feeling arising from calmness of mind helps to refresh and reenergize our minds, and the very same nice feeling motivates us to keep on practising meditation. In Vipassana meditation, effort is the action of constantly observing the true nature of body, feelings, memory, thoughts and consciousness. When the mind realizes the true nature of Impermanent, Unstable and Not-self, the mind will release attachment. Once letting go of clinging happens, the mind will experience peaceful liberation.

Such extraordinary nice feeling of freedom from suffering will be self-inspiration, and will generate great effort. The clearer we know what we want in life, the more focus we have towards our goal. And we will put all of our physical and mental energy towards that direction. We will not waste time in life doing some other useless things.

So the next quality of 'staying focused' will come much easier when the first two qualities are well developed. People who practise meditation regularly will have more advantage in controlling their mind and focusing their mind on their work.

## 3) The Four Paths to Success<sup>9</sup>

Having recently discussed the individual factors comprising the 'four paths to success' (iddhipada), the following passage from Buddhadhamma illustrates how

<sup>&</sup>lt;sup>9</sup> The Four Paths to Success, 26 September 2018, (online) https://www.buddhist teaching.org/the-four-paths-to-success.

these four factors apply in a practisal setting: These four paths to success are mutually supportive and tend to arise in unison. For example, one may be very enthusiastic about something and very energize; with such energy the mind is focused and one pays close attention; there is then the opportunity for wisdom to be used for investigation. The separation of these four factors aims to highlight in different situations which factor is prominent, acting as a catalyst for the others. For example, several people may be listening to a Dhamma talk. One person likes to study the Dhamma and listens with delight in the truth; she wants to deepen her understanding of the Dhamma (or perhaps simply takes pleasure in that particular talk or she likes the speaker) and listens with one-pointed attention.

**Chanda** is thus the predominant factor and induces concentration along with other virtues. Another person has a disposition, or simply has a conviction in that moment, that when facing a necessary task, one must fight and gain victory—one must confront the task at hand and bring it to completion. He thus sees the subject matter of the talk as a challenge, as something that must be understood.

**Viriya** is the prevailing factor. Another person has the disposition of being attentive and responsible; whatever she engages with she responds and pays attention to. She is thus determined to follow the presentation of the talk.

**Citta** is the predominant factor, finally, a fourth person wishes to examine whether the Dhamma being propounded is true or not, wholesome or not, or he looks at the logic of the presentation. While listening he investigates and his mind is one-pointed on the subject of the talk.

Vimamsa is chief, due to the interrelationship of these factors, there are some passages which determine the prominent or leading factor in specific circumstances. Moreover, they refer to the four paths to success as the four 'governors' (adhipati) or the four kinds of 'sovereignty'.

The gist of developing concentration in line with the four paths to success is to take one's work, activity, or desired goal as the object of attention, and then to muster enthusiasm, energy, focused attention, or investigation as a primary support. This will give rise to strong concentration, which leads to both joy and success.

In Dhamma practice, in the act of studying, or while performing any other activity, when one wishes for concentration in order to accomplish the task, one should

generate one of the four paths to success as a leading spiritual factor. Concentration, contentment, and success in one's work can then be expected to arise naturally. Moreover, part of one's meditation and spiritual practice will take place in the classroom, at home, in the fields, at the office, and indeed everywhere.

For example, when a teacher teaches a subject of study, she makes herself a 'virtuous friend' (kalyana-mitta), by helping the pupils see the value of this branch of knowledge and by revealing how this knowledge may be beneficial to their lives, say as an aid to finding work in the future, as a way to move ahead in life, or as profitable in some other way (here she uses craving as a means for generating enthusiasm). Or better than that, she points out the benefits for everyone, say as a way of helping all human beings (this is 'pure' enthusiasm), until the pupils develop a love for learning because they want to gain this knowledge. This is a way of rousing chanda.

Alternatively, she may speak of this knowledge as something which tests a person's awareness, discernment, and capability, stimulating an ardor for learning, or she discusses the accomplishments of others, producing a fighting spirit in the pupils. This is a way of rousing viriya.

She may stimulate a sense of responsibility in the pupils, so that they see the connection and importance of this knowledge to their lives and to society as a whole, say by pointing out issues of danger and safety. This way, although the students may not be particularly passionate about the subject of study, they will take an interest and give their undivided attention. This is a way of rousing citta. She may teach using methods of inquiry, experimentation, or reasoning, say by posing questions or conundrums, which requires the pupils to apply investigation. Thus the pupils will study intently. This is a method of applying vimamsa.

It is even better if the teacher is able to recognize the disposition of individual students and rouses the specific factor leading to success which is compatible with his or her disposition; or she may rouse several factors simultaneously. At the same time, students (or anyone else engaged in work) who are clever may apply wise reflection (yoniso-manasikara) to rouse the paths to success by themselves.

## 2.7.2 Four Iddhipadas

The thing is which, there is virtue reach to arrive at the success according to the self purposes, person hope the success in an anything, must behave completely, with the thing that call that, Four Rddhippada, to relation quality assurance and education standards, which 4 steps that links all 4 items, thus they will be successful in life and work as intended, so explain below<sup>10</sup>.

- 1) **Chanda** (proxy) is the patriotic thing to do, by the heart that loves is Because of faith and believe in what they do. It should be based on actual results, people have heard the term. Which The understand of this thought is correct only half, because the meaning of "Chanda" is not mean as a promise or contract language paper promise to member group only, if an agreement is not binding and mind. It is the faith and confidence that is full, it takes perseverance to come, comparable to researchers who believed and confidence in the concept of research to local practices, which can be less-very different, by except—researchers, and the results of the actual work was revealed to the public.
- 2) Viriya (effort) is a commitment both physically and mentally, to learn and access the essence of the matter that thing, if do will do until expert as specialized knowledge, if the study will study until the know the rootless of the matter, it inductive that we have falsely proxy, or falsely believing both myself and lie to deceive others, but Faith orally without even a shadow of commitment and dedication, if you have faith, but others are thinking and action, which Viriya is to be persistent and patient, an indomitable sense of the problem and hope to overcome all obstacles, by the faith is an anchor that brings to mind the observation and patience for a calm mind and beauty, not recklessly aggressive persistence and ardor, it will make a mistake easily, because it will make a mistake easily.
- 3) **Citta** (thoughtfulness) is a mind focused and responsible, when the mind is focused, it will be carefully followed, this great present, social sophisticated new things, caused many each person has an obligation many do not know what to do before and after, reading time thought responsible. They would be well-versed with the mind focused increasingly entrenched and their learning. When The more knowledgeable will be carefully followed, when there is a deliberate decision to do something, then it

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<sup>&</sup>lt;sup>10</sup> Phra Brahmagunabhorn (P.A.Payutto), **Dictionary of Buddhism**, 2002.

would be a mistake less follow providence, which will not happen if they were not so well-rounded.

4) **Vimamsa** (investigation) is reviewing the discriminatory thoughts on what has been done. Arising from an happy love (proxy) and made a commitment (persistence) anxiously and responsibilities (Citta) using judgment wisely and carefully, thus leading to the review itself, and review the organization or movement in reviewing what has been done to figure out what caused past that the advantages and disadvantages, to the delight of himself or for the peace of society and another. Which how we know we should be at the point where the society or their own, however, to the creation and more classy

## 2.7.3 Quality Cycle

To apply Deming's cycle to quality, which quality is very important in the operation, In order to create quality in quality management, the PDCA (Plan, Do, Check, Act) cycle is used to initiate continual improvement of curriculum quality. The four components can be described as follows.

- 1) **Planning**, as the planning process is the most important step. By the beginning, it must be aware of the problem and determine the problem to be solved. For data is collected, choose an alternative and analyze alternatives to choose the way to use them.
- 2) **Doing**, by the decision to go into action, ensuring that the person is aware of the purpose and the need is now, and to those who are responsible for implementing the plan. Know the details and procedures are planned to perform the plan and the resources needed.
- 3) **Checking**, the check is monitored and evaluated. The evaluation should evaluate the organization's performance as a plan. Is the content of the plan complete? If the assessment shows that the work is accurate, it can be set to standardize for the next operation.
- 4) **Acting**, to practice the standard set out in the performance. To use as a guideline in the future and make changes in the results that do not meet the goals set. Once the results have been accepted by all parties, they are reported to the management and agencies in the organization. It is important to find the purpose or goal. Caused by

bad planning from the beginning. Organizations must find the cause of poor planning. Then improve the planning quality and improve the content of the plan.

Therefore, the curriculum has to meet the standards and graduate quality. It depends on the teacher so everyone must have a sense of quality and excellence did not finish work. It must always be remembered that his work will affect the quality of graduates delivered to the entrepreneur or the owner of the organization. If his work is problematic, it will result in the next step in the process, and make entrepreneurs get poor quality or poor quality. This will have a negative impact on the instructor.

For take Deming's cycle to apply in the curriculum quality management by processes and methods of internal quality assurance in education (academic year 2014 - 2018) to ensure benefits the quality of education. Should have guideline to manage the process for the internal quality assurance of education, which according to the quality cycle consists of 4 stages, are: planning, Doing, Check or Study and Act by proposing an improvement<sup>11</sup>.

**P** = Start the planning process at the beginning of the school year. By the results of the previous year's evaluation were used as planning data, with data collected from June. The use of traditional open-ended systems. Or from August. Use the open-closed system, ASEAN Education.

 $\mathbf{D}$  = Operate and keep records of the performance since the beginning of the academic year, such as the  $1^{st}$  -  $12^{th}$  month of the academic year. (June - May, Next year or August - July next year)

 ${f C}$  /  ${f S}$  = To perform quality assessment at the curriculum level, faculty and institute level, between June – September or August - November of the next academic year.

 ${\bf A}={
m To}$  plan for improvement and implemental improvements based on evaluation results. By management committee of the curriculum level, Faculty and Institution Level.

By the recommendations and evaluation results of the internal quality assurance committee has planned to improve the operation. Include the recommendation of the University Council, to manage an annual action plan and

<sup>&</sup>lt;sup>11</sup> Manual to quality assurance in higher education in 2014, p.22.

budget propose for the next year. Or develop a project to offer mid-year budget or special budget. Internal quality assurance method are as follows.

- 1) The Institute of Internal Quality Assurance Education Plan for the new academic year.
- 2) The institute collects 12 months of data according to the indicators published on the CHE QA Online System and provides an annual quality assessment of the education at the curriculum level, Faculty and Institute level.
- 3) The curriculum self-assessment preparation in the curriculum level and manage to self-assessment report (SAR). By past CHE QA Online.
- 4) The faculty or equivalent department conducts the curriculum assessment to manage a self-assessment report of the faculty level.
- 5) The faculties or equivalent department to self-assessments on the CHE QA Online System and submit the evaluation results of the assessed curriculum.
- 6) The Institute conducts curriculum evaluation and the faculty evaluation level to manage self-assessment report in institute level.
- 7) The institute self-assessment on CHE QA Online System and summit self-assessment results in the curriculum level, faculty level and the evaluate results offered to the Institute Council for consideration to the developed plan in the next academic year.
- 8) The administrator of higher education institutions shall take the evaluation results and recommendations of the internal quality assessment committee at appointed by the Institute. (Including the recommendation of the Institute Council) to plan the improvement of operations, annual plan and strategic plan.
- 9) To submit the annual report as internal quality assessment report through the CHE QA Online system within 120 days of the end of the academic year. Higher education institutions must have self-assessment based on indicators and quality assurance criteria. Every academic year, Third level, the curriculum level, faculty and the institute level, respectively, by the higher education institution are appointed, and submit the evaluation results to the Office of the Higher Education Commission, through the data base of quality assurance (CHE QA Online).

To the internal evaluation committee one level, may evaluate more than one curriculum in the same field program, such as same field program in undergraduate and graduate studies.

In case of need to distribute quality and standard curriculum according to Thailand Qualification Framework (TQF) 2009, the composition of the Internal Quality Assessment Committee of curriculum education levels, determine as follows:

- 1) At least 3 qualified persons, more than half of them are external experts, and at least one person must be qualified to meet the requirements of the evaluative curriculum.
- 2) The chairman of the committee is an external expert institute. By the committee member must be registered by an internal quality assurance auditor curriculum of the Office of the Higher Education Commission, specific Qualifications of the Internal Quality Assessment committee levels for each level are as follows.
- 3) In the bachelor's degree level assessment, the committee member must be a master's degree or academic position, Assistant Professor
- 4) In the master's degree level assessment, the committee member must be a doctorate /academic position, Associate Professor
- 5) In the doctoral degree level assessment, the committee member must be doctorate degree or a academic position of a professor up. In the case where the internal quality assurance of higher education level to registered by TQR system.
- **2.7.3 Henri Fayol**<sup>12</sup> (1 8 4 1 -1 9 2 6), This article explains the administrative theory of the 14 Principles of Management by Henri Fayol in a practical way. After reading you will understand the basics of this powerful management tool.

Introduction 14 principles of Management, Henri Fayol's principles of management and research were published in the book 'General and Industrial Management' (1916). 14 principles of Management are statements that are based on a fundamental truth. These principles of management serve as a guideline for decision-making and management actions. They are drawn up by means of observations and

<sup>&</sup>lt;sup>12</sup> Fayol, H. General and Industrial Management. Dunod et E. Pinat. 1917.

analyses of events that managers encounter in practice. Henri Fayol was able to synthesize 14 principles of management after years of study, as follows:

#### 1) Division of Work

In practice, employees are specialized in different areas and they have different skills. Different levels of expertise can be distinguished within the knowledge areas (from generalist to specialist). Personal and professional developments support this. According to Henri Fayol specialization promotes efficiency of the workforce and increases productivity. In addition, the specialization of the workforce increases their accuracy and speed. This management principle of the 14 principles of management is applicable to both technical and managerial activities.

#### 2) Authority and Responsibility

In order to get things done in an organization, management has the authority to give orders to the employees. Of course with this authority comes responsibility. According to Henri Fayol, the accompanying power or authority gives the management the right to give orders to the subordinates. The responsibility can be traced back from performance and it is therefore necessary to make agreements about this. In other words, authority and responsibility go together and they are two sides of the same coin.

#### 3) Discipline

This third principle of the 14 principles of management is about obedience. It is often a part of the core values of a mission and vision in the form of good conduct and respectful interactions. This management principle is essential and is seen as the oil to make the engine of an organization run smoothly.

#### 4) Unity of Command

The management principle 'Unity of command' means that an individual employee should receive orders from one manager and that the employee is answerable to that manager. If tasks and related responsibilities are given to the employee by more than one manager, this may lead to confusion which may lead to possible conflicts for employees. By using this principle, the responsibility for mistakes can be established more easily.

#### 5) Unity of Direction

This management principle of the 14 principles of management is all about focus and unity. All employees deliver the same activities that can be linked to the same objectives. All activities must be carried out by one group that forms a team. These activities must be described in a plan of action. The manager is ultimately responsible for this plan and he monitors the progress of the defined and planned activities. Focus areas are the efforts made by the employees and coordination.

#### 6) Subordination of Individual Interest

There are always all kinds of interests in an organization. In order to have an organization function well, Henri Fayol indicated that personal interests are subordinate to the interests of the organization (ethics). The primary focus is on the organizational objectives and not on those of the individual. This applies to all levels of the entire organization, including the managers.

#### 7) Remuneration

Motivation and productivity are close to one another as far as the smooth running of an organization is concerned. This management principle of the 14 principles of management argues that the remuneration should be sufficient to keep employees motivated and productive. There are two types of remuneration namely non-monetary (a compliment, more responsibilities, credits) and monetary (compensation, bonus or other financial compensation). Ultimately, it is about rewarding the efforts that have been made.

#### 8) The Degree of Centralization

Management and authority for decision-making process must be properly balanced in an organization. This depends on the volume and size of an organization including its hierarchy.

Centralization implies the concentration of decision making authority at the top management (executive board). Sharing of authorities for the decision-making process with lower levels (middle and lower management), is referred to as decentralization by Henri Fayol. Henri Fayol indicated that an organization should strive for a good balance in this.

#### 9) Scalar Chain

Hierarchy presents itself in any given organization. This varies from senior management (executive board) to the lowest levels in the organization. Henri Fayol 's

"hierarchy" management principle states that there should be a clear line in the area of authority (from top to bottom and all managers at all levels). This can be seen as a type of management structure. Each employee can contact a manager or a superior in an emergency situation without challenging the hierarchy. Especially, when it concerns reports about calamities to the immediate managers/superiors.

#### 10) Order

According to this principle of the 14 principles of management, employees in an organization must have the right resources at their disposal so that they can function properly in an organization. In addition to social order (responsibility of the managers) the work environment must be safe, clean and tidy.

#### 11) Equity

The management principle of equity often occurs in the core values of an organization. According to Henri Fayol, employees must be treated kindly and equally. Employees must be in the right place in the organization to do things right. Managers should supervise and monitor this process and they should treat employees fairly and impartially.

#### 12) Stability of Tenure of Personnel

This management principle of the 14 principles of management represents deployment and managing of personnel and this should be in balance with the service that is provided from the organization. Management strives to minimize employee turnover and to have the right staff in the right place. Focus areas such as frequent change of position and sufficient development must be managed well.

#### 13) Initiative

Henri Fayol argued that with this management principle employees should be allowed to express new ideas. This encourages interest and involvement and creates added value for the company. Employee initiatives are a source of strength for the organization according to Henri Fayol. This encourages the employees to be involved and interested.

#### 14) Esprit de Corps

The management principle 'esprit de corps' of the 14 principles of management stands for striving for the involvement and unity of the employees. Managers are responsible for the development of morale in the workplace; individually

and in the area of communication. Esprit de corps contributes to the development of the culture and creates an atmosphere of mutual trust and understanding.

#### 2.6.4 Conclusion

By Four Rddhippadas, to relation quality assurance and education standards, which 4 steps that links all 4 items, for Deming's cycle (PDCA) to apply in the curriculum quality management by processes and methods of internal quality assurance in educational yearly, and the 14 principles of management can be used to manage organizations and are useful tools for forecasting, planning, process management, organization management, decision-making, coordination and control. Although they are obvious, many of these matters are still used based on common sense in current management practices in organizations. It remains a practical list with focus areas that are based on Henri Fayol 's research which still applies today due to a number of logical principles.

#### 2.8 The research works

Nipon Opasee<sup>13</sup>, Administration according to the four Iddhipada of Huaithuanuea Sub-district Administrative organization in Nongbua District, Nakhonsawan Province, 2014. Results of the Research 1. Overall, the people's opinion toward the administration according to the four Iddhipada of Huaithuanuea Sub-District Administrative Organization in Nongbua District, Nakhonsawan Province was at the high level (□= 3.43). When considering each aspect: Chanda, Viriya, Citta, and Vimamsa, it was found that the people's opinion toward the administration according to the four Iddhipada of Huaithuanuea Sub-District Administrative Organization in Nongbua District, Nakhonsawan Province was at the high level in all the aspects. 2. The comparison of the people's opinion toward the administration according to the four Iddhipada of Huaithuanuea Sub-District Administrative Organization in Nongbua District, Nakhonsawan Province by classifying on the personal factors was found that the people having the different opinion toward the administration according to the four Iddhipada of Huaithuanuea Sub-District Administrative Organization in Nongbua

<sup>&</sup>lt;sup>13</sup> Nipon Opasee, Adminstration according to the four Iddhipada of Huaithuanuea Sub-district organization, 2014.

District, Nakhonsawan Province. Therefore, the hypothesis was denied. 3. The problems, obstacles, and suggestions for the administration according to the four Iddhipada of Huaithuanuea Sub-District Administrative Organization in Nongbua District, Nakhonsawan Province were that mostly the administrators wielded the decision. Moreover, the administrators did not bring the problems to make the database for making the plan. The people had no the participation in the organization. Therefore, the administration of the Sub-District Administrative Organization should survey the demand of the people in the community to bring the data for setting the policy. The policy should meet the demand of the people absolutely. Moreover, the Sub-District Administrative Organization should give the opportunity to the people in the participation to check the administration in the project and the activity of the Sub-District Administrative Organization. The administrators should apply the Dhamma principles in the administration such as the four Iddhipada: Chanda (the will), Viriya (the effort), Citta (the thoughtfulness), and Vimamsa (the investigation).

Phrakru uthaisutkic<sup>14</sup>, Managerial Success with Four Iddhipada of Buddhist Monks for Buddhism Propagation in the Region of Uthaithani Province.

Research findings were as follows: 1) A whole of success and the belief aspect in Buddhism with the I4BM for BP, they were at the high level. On the contrary, three following aspects were at the low level, namely management, personality, and communication (p < .05); 2) Confirmatory components of the MS with I4BM for BP in terms of following aspects: personality, communication, management, belief in Buddhism, and successfulness, consisted of 3, 3, 7, 4, and 4 crucial components respectively; and 3) As a result of casual analysis with the model of the MS with I4BM for BP, it was found that all data were relevant with the model, statistics as Chi-square = 109.14, df = 184, P-value = 1.000, RMSEA = 0.000. Also, it was concluded that the model could be appropriately and could be explained as follows: the MS with I4BM for BP in RUP received direct effects from both crucial factors of Belief in Buddhism and Management at the low level. Also, it received an indirect effect from the personality factor at the moderate level through the factor of management or belief in Buddhism.

<sup>&</sup>lt;sup>14</sup> Phrakru Uthaisutkic, Managerial Success with Four Iddhipada of Buddhist Monks for Buddhism Propagation, 2014.

All those could predict the MS with I4BM for BP at 45.10 percent and at the .05 level of significance. Keywords: Managerial Success, Buddhism Propagation Four Iddhipada Uthaithani Province

Naiyana Phromsuay<sup>15</sup>, An application of 4 paths of accomplishment to Human resource development of local administrative Organizations in chondaen distriat of phenchabun province. The findings of the study indicated: 1. The overall levels of an application of 4 paths of accomplishment (Iddhipada) to human resource development of local administrative organizations in Chondaen district of Phetchabun province was high (x= 3.69). When considering each aspect, it showed Chanda (aspiration) toward human resource management was high (x=3.79); Citta (dedication) toward human resource management was high (x= 3.67), and Vimamsa (investigation) (x= 3.59), respectively. 2. The comparative results of an application of 4 paths of accomplishment to human resource development of local administrative organizations in Chondaen district of Phetchabun province. Except different levels of education, the opinion on an application of 4 paths of accomplishment to human resource development of local administrative organizations in Chondaen district of Phetchabun province was statistically significant at the 0.05 level. by personal factors: sexes, ages, and careers, were indifferent. 3. The recommendations on the opinion toward an application of 4 paths of accomplishment (Iddhipada) to human resource development of local administrative organizations in Chondaen district of Phetchabun province were 1) the executives of local administrative organizations had to apply the principles of the 4 paths of accomplishment to human resource development within their organizations in order to advance management efficiency appropriate to visions and missions of the local administrative organization, 2) any policies of human resource development should proceed creativity and benefits in work with the principles of Chanda (aspiration), Viriya (perseverance), Citta (dedication), and Vimansa (investigation) at any time in order to accomplish personnel's working performance, 3) the policy to strengthen morale for personnel such as a gift, a reward, a bonus, an academic trip or even praise for good performance should be implemented in order to fortify potential

<sup>&</sup>lt;sup>15</sup> Naiyana Phromsuay, an application of 4 paths of accomplishment to Human resource development of local, 2013.

personnel as good examples for the other and also motivate those with good performance to perform their duties with full abilities.

Patchara Piluk, 2012<sup>16</sup>, State and problems of internal quality assurance implementation in higher education: Nonthaburi province the analysis results found that most of the respondents were female. They had a master's degree and their position in an academy as officers who were not in academic level. Their work experience was more than 3 years. The research reviews the levels of officers' opinion on internal quality assurance in higher education in Nonthaburi province. When considering overall, and each of the aspects of opinion levels, It was found that their opinion on operational plans were at the highest average, followed by auditing or assessment, improvement, and development including plan implementation. The levels of officers' opinion on problems of internal quality assurance in higher education in Nonthaburi province were also examined. When considering, overall and each of the aspects of opinion levels, it was found that their opinions on operational plans were at a medium level by were the highest average, followed by plan implementation, improvement, and development including auditing or assessment. In summary, a comparison of the samples' general data with officers' opinion levels towards the state of, and the internal quality assurance in higher education in Nonthaburi. When considering overall opinion levels, classified by gender, level of education, position in academy, academic level. It was found that there was no significant difference. The research also concerned officers' opinion levels on problems in an internal quality assurance in higher education in Nonthaburi province. When considering overall and opinion levels, classified by gender, level of education, position in academy, there was the difference in term of opinions at 0.05 level of significance.

 $Somsith \ Songprasom^{17} \ , \ (2007) \ Employees' \ Attitude \ Toward \ Chulalongkorn \\ University$ 

Quality Assurance (CU-QA). The study results showed that the employees attitude of Chulalongkorn University was the middle level. Cognition Component was

<sup>&</sup>lt;sup>16</sup> Ratchara Piluk, State and problems of internal quality assurance implementation in higher education, 2014.

<sup>&</sup>lt;sup>17</sup> Somsith Songprasom, Employees' Attitude Toward Chulalongkorn University Quality Assurance (CU-QA), 2007.

reported at the high level while Affective Component and Behavioral Tendency Component were reported at the middle level. The finding were 1) there was no statistically significant differences in their attitude toward Chulalongkorn University Quality Assurance (CU-QA) among the employees with different gender, age, type of work, education, job level, work experience in Chulalongkorn University and status of participation at the significant level of 0.05, 2) most of the employees noted that the quality assurance could bring about change the working system of department with more efficiency and the key success factor to adjust this system were system factor and personnel factor, 3) most of the employees recommend the university to set course training for employees more and their development along with the working system of the department to prepare for the adjustment of this system to be use in the department. The limitation of this study lie on a limited time that affected the data collection because samples studied were only from the academic Institutes/Colleges/Schools groups and not from the overall employees in Chulalongkorn University. If we also collect data from employees of the other departments the results of the study on the employees' attitude toward Chulalongkorn University Quality Assurance (CU-QA) would be more distinct and valid.

Orranun Harnyoot<sup>18</sup>,(2014) The Participation in Educational Quality Assurance of Eastern Asia University Personnel. The results showed that the participation of Eastern Asia University personnel overall was at moderate level (= 3.40). Participation in educational quality assurance of personnel, classified by experience of work, working position, performance characteristics, and duration of work in Eastern Asia University, showed statistically significant difference at level 0.05, the gender age and level of education no significant difference. Mental characteristics of personnel were attitude toward educational quality assurance, attitude toward participation in educational quality assurance at the significant level 0.05. The surrounding of a work factors were supporting from administrators, cooperation of colleagues, organizational climate, organizational culture, communication and quality

<sup>&</sup>lt;sup>18</sup> Oranun Harnyoot, The Participation in Educational Quality Assurance of Eastern Asia University Personnel, 2014.

assurance training, had related to participation in educational quality assurance of personnel at the statistically significant level 0.05.

Panop Jangploy<sup>19</sup>. (2013). A Study of the Condition of Internal Education Quality Assurance of Schools under Chanthaburi Primary Educational Service Area Office. The results of the study were revealed as follows: 1) the condition of internal education quality assurance of schools under Chanthaburi Primary Educational Service Area Office was shown at the high level. 2) The comparison of the condition of internal education quality assurance of schools under Chanthaburi Primary Educational Service Area Office classified by the working did not show statistically significant difference.

3) The comparison of the condition of internal education quality assurance of schools under Chanthaburi Primary Educational Service Area Office classified by the school size for the overall aspects did not show statistically significant difference.

Panida Vashararangsi<sup>20</sup> ,(2013), The Perception and Participation Quality Assurance. In Education of Private Higher Education Institutions in Nonthaburi

The results showed that the staff of private higher education in Nonthaburi to the perception and participation in quality assurance in higher education in Nonthaburi's respondents were male than female, and male perceived the quality assurance of higher education than female. Also people aged 20-30 years perceived the quality of education most. Staff in Higher Education with a doctoral degree perceived the participation in quality assurance highest. Also difference of workplaces affected the recognition of different quality assurance. These results suggested that different position effect people's opinion in recognition and participation in quality assurance differently as well. The staff in higer education in Nonthaburi with the work age less than one year recognized and participated in quality assurance in higher education than other groups, and when compared the perception of the quality assurance of the staff in higher education in Nonthaburi classified by age found that only the awareness and participation of quality assurance in operation of quality assurance are statistically different at the .05 level. The results of the hypothesis testing found that the perception

<sup>&</sup>lt;sup>19</sup> Panop Jangploy, A Study of the Condition of Internal Education Quality Assurance of Schools under, 2013.

<sup>&</sup>lt;sup>20</sup> Panida Vashararangsi, The Perception and Participation Quality Assurance in Education of Private Institutions, 2013.

of quality assurance of staff in higher education level in Nonthaburi had the overall opinions in high level. For the participation of the quality assurance in education in Nonthaburi had opinion in average level, and when considered in each item found that overall opinions were in average level. The staff in higher education level in Nonthaburi classified by gender were found as assumed in the hypothesis that the difference in gender affected the perceptions. And the participation in quality assurance in education classified by age was found to be inconsistent with the hypothesis that the age difference did not affect the perception and participation of quality assurance in education. When classified by level of education found consistent with the hypothesis that the differences in education levels affect the perception and participation in quality assurance in education; in accordance, by place of work found consistent with the hypothesis that different work places affected the perception and participation in quality assurance in education. By the job position found consistent with the hypothesis that difference of the job position affected the perception and participation in quality assurance in education. Lastly, when classified by age found inconsistent with the hypothesis that the difference in age affected the perception and participation in quality assurance in education.

Pensri Chungtanajaroenlert and Pachaya Tangsira<sup>21</sup> (2011) Knowledge, Understanding, and Participation in Quality Assurance Operation among Personnel at Boromarajonani College of Nursing, Saraburi. The result showed that the overall means of knowledge, understanding, and in the quality assurance operation of school personnel were at high level. Factor of age and job position were statistical significantly associated with the overall mean of knowledge and understanding in the quality assurance operation, but not years of working (p < .05). The overall means of knowledge and understanding of staff in the group of 40-49 years old was higher than those 20 - 29 years old (t = 2.1750, p < .05). The nursing instructors had higher scores of knowledge and understanding than the clerical staff (t = 1.654, p < .05). Among the clerical staff, although the score on participation in quality assurance operation was

<sup>&</sup>lt;sup>21</sup> Pensri Chungtanajaroenlert and Pachaya Tangsira, Knowledge, Understanding, and Participation in Quality Assurance Operation among Personnel at Boromarajonani College of Nursing, Saraburi. 2011.

high, there was no significant different among different among factor of age, years of working, and job position. It is recommended that finding could be used as a basis for promoting appropriate knowledge, of quality assurance for personnel with regards to age, period of practice, and where the different lines of management at the early years of work needs which needs to get knowledge support system, clear understanding about the Quality Assurance. The college must develop the knowledge and the awareness at the beginning of the personnel work commencement to be able to understand which important to quality assurance processes. This will lead to a culture of actual work quality of the personnel.

Pattanaphong Chankuang<sup>22</sup>. Strategies for Developing Educational Quality Assurance of the Rajabhat Universities in Bangkok.

Educational Quality Assurance of Rajabhat Universities in Bangkok Rajabhat University in Bangkok Has developed from the context of being a school, college, teacher, and the Rajabhat Institute is a higher education institution in group B. There are 5 undergraduate institutions and 2 higher education institutes in the C2 group. One is a specialized institute focusing on the bachelor degree, namely, Suan Dusit Rajabhat University, using the PDCA system and the driving mechanism is the University Council. Academic staff, academic support staff, students and stakeholders of the university are all responsible for the quality assurance of education. 1) the general context and background of educational quality assurance of the Rajabhat universities in Bangkok had been developed from schools, teachers colleges and Rajabhat institute to five institutions for the undergraduate degree and one institute for the specific undergraduate degree. All of them used PDCA system and the university council, administrators, lecturers, staffs, students and stakeholders worked together with educational quality assurance department of the universities. 2) The overall three-year average score of the internal educational quality assurance at Rajabhat universities in Bangkok during 2010-2012 were found as follows: the two highest scores ( $\times = 4.95$ ) were the sixth factor, arts and cultural conservation and the eighth factor, finance and

<sup>&</sup>lt;sup>22</sup> Pattanaphong Chankuang "Strategies for Developing Educational Quality Assurance of the Rajabhat Universities in Bangkok. Dissertation, Doctor of Philosophy (Development Strategy) Phranakhon Rajabhat University, 2015.

budgeting while the lowest scores ( $\times = 4.22$ ) was the second factor, the numbers of lecturers who had doctoral degrees and who had academic positions. The results from external educational quality assurance had been as follows: the highest scores ( $\times = 5.00$ ) was the eleventh factor, developing aesthetics in arts and cultural while the lowest scores ( $\times = 2.29$ ) was the fifth factor, research or creativity work which had been published or accepted. 3) In order to develop the strategies for developing educational quality assurance of the Rajabhat universities in Bangkok, the three strategies had to be implemented as follows: firstly, integrating every university's mission into educational quality assurance system. Secondly, developing the human resources capacities in order to support the system of educational quality assurance. Finally, developing informational technology system to increase the efficiency of educational quality assurance management.

Sasithorn Vachirapunyaphong<sup>23</sup>, (2013). The structural relationship model of knowledge management effectiveness of quality assurance for Higher Education. The main objective were of research to study of the relationship between Knowledge Management and effection to Quality Assurance. This research was quantitative research techniques on aspect of Structural Relationship Studies of several variables on the Quality Assurance of Higher Education Institutions. The sample was institutes of Higher Education that have been evaluated by the Officer of Standards and Quality Assessment (Public Organization) in the 2nd round (in 2006-2010). Analyzed data by structural equation modeling. The results of the study was found that average score Latent Variable factors which high level, which included; Knowledge Management and Quality Assurance for Higher Education. The average scores were 4.08 and 3.67 respectively. The structural equation modeling, which included; Knowledge Management, and Quality Assurance for Higher Education most direct and indirect positive effects. Model validation measures repealed :  $x^2$  = 46.36, df= 35, P-Value for Test of Close Fit = 0.83; NFI = .99; IFI= 1.00; CFI = 1.00; CN = 334.55. The variables in the model accounted for 73 percent of the variance of Knowledge Management and

<sup>&</sup>lt;sup>23</sup> Sasithorn Vachirapunyaphong, The structural relationship model of knowledge management effectiveness of quality assurance for Higher Education. Dissertation, Doctor of Management Department of Human Resource Management, Sripatum University, 2013.

Quality Assurance for Higher Education. The describe was variables with a statistically significant direct positive effect on Knowledge Management and Quality Assurance for Higher Education (.85). Variables Knowledge Management having a statistically significant direct positive effect on Quality Assurance for Higher Education (.32).

### 2.9 Concept of Analysis

This research, which researcher uses the knowledge from the Four Iddhipadas and Deming Cycle or PDCA cycle is a concept of resear4ch and a base for analysis.

#### **3 Main Points**

#### 1. Internal Quality Assessment in Higher Education.

- 1.1 Curriculum Standard Supervision
  - 1.2 Graduates
- 1.3 Students
- 1.4 Teacher / Instructors
- 1.5 Curriculum & Assessment of Learners
- 1.6 Learning Support

#### 2. PDCA in the Process

For Management Internal Quality Assessment in Higher Education.

#### 3. Four Iddhipadas for Training the Staff of Institute

- 3.1 Dean
- 3.2 Teacher / Instructors
- 3.3 Officers

Figure 2.1 Concept of Analysis

# **Chapter III**

## **Research Methodology**

The research title "Internal Quality Assurance Management based on Four Iddhipadas for Curriculum in Higher Education Institutions". Researcher to operate the Mixed Methods Research, by using the research methodology with mixes to collection of data from documents. Collect data from the field questionnaire, and in-depth interviews with those involved in Internal Quality Assurance for Curriculum in Higher Education Institutions, which is the main contributor, and question from the sample groups, the topics and operate steps as follows.

- 3.1 The research method
- 3.2 The main contributor / population and sample group
- 3.3 The Research tools
- 3.4 The data collection
- 3.5 To using statistics for data analysis

#### 3.1 The research method

The topic research "Internal Quality Assurance Management based on Four Iddhipadas for Curriculum in Higher Education Institutions" there are mixed research method between qualitative research and confirm with quantitative research, by indepth interview from the executive, an expert and stakeholders number 36 persons, and question from the sample groups about 400 persons

### 3.2 Population or Sample groups

# 3.2.1 The interview for the executive, an expert and stakeholders 36 persons

- 1) To interview the regulatory authorities for internal quality assurance in the curriculum level (Director, committee and Senior Lecturer) 6 persons.
- 2) To interview the president or vice president in in Higher Education Institutions number 10 persons.

3) To interview the dean or deputy dean of the faculty in Higher Education Institutions number 20 persons.

#### 3.2.2 The question from the sample groups about 400 persons

- 1) To question the teacher / instructors
- 2) The personal of IQA / SAR
- 3) The head / chairman of program
- 4) All of them are 436 persons

#### 3.2.3 Scope of area of the sample groups about 400 persons

In this research areas for the field instructors and personnel total 14 Higher Education Institutions as follow:

- 1) Five Rajabhat University: Phranakhon Rajabhat University, Chiang Rai Rajabhat University, Rambhaibarni Rajabhat University, Phranakhon Si Ayutthaya Rajabhat University and Kamphaeng Phet Rajabhat University
- 2) Five the University of the Private: Bangkok Thonburi University, Western University, Pathumthani University, Shinawatra University and Rajapark Institute
- 3) Two Rajamangala University of Technology: Rajamangala University of Technology Suvarnabhumi and Rajamangala University of Technology Tawan-ok
  - 4) Mahachulalongkornrajavidyalaya University
  - 5) Mahamakut Buddhist University

#### 3.3 The Research tools

To create of research tools from Deming's cycle conceptual framework and Four Iddhipadas. By bringing a guideline for structured interviews, and the questionnaire creation to collect quantitative data.

#### 3.3.1 Qualitative Research Tools

To create of research tools, which the researcher studied the document and research papers related to the internal quality assurance of the curriculum in higher education institutions. By create a structural interview, to in-depth interview with a 36 experts in higher education institutions, by purposive sampling.

#### 3.3.2 Quantitative Research Tools

Creating questionnaire for quantitative data, researcher study the document, relative research study, the executive, and stakeholders to guideline for creating research tools to support for interview result, by ask the supervisory committee of dissertation. Then send them to quality inspection experts, which bringing to approve and to collect field data, by the questionnaire divided into 4 parts.

Part1: General information of the questionnaire answer.

Part2: Questionnaire about teacher's opinions, head of Curriculum / Chairman and staff involved in internal quality assurance of curriculum level, for quality cycle (Deming's PDCA cycle), by divided into 4 major topics: 4 sub-clauses each 5-6 details, total about 22 items.

Part3: Questionnaire about teacher's opinions, head of curriculum / chairman and staff involved in internal quality assurance of curriculum level, Four Iddhipadas, to divide into four major topics each four sub-clause 5-6, total about 22 items.

Part4 : Additional suggestions, which are open-ended questions for additional comments and suggestions.

#### 3.4 The data collection

The data collected by the researcher has been data, by try - out of research instruments as 30 questionnaires, results to alpha = 0.957.

#### 3.4.1 Qualitative data collection

defined to plan for include the following

By in-depth interviews, to use structured interviews, researchers bring the book out of the official of IBSC. By the endorsement of the Director of the International Buddhist Studies College. To ask for expert interviews with the self. Then send the context / content will be used in the interview and the date, time and place. In the interview, the researcher will ask the expert to use the voice recorder, and still cameras and moving images.

#### 3.4.2 Quantitative data collection

To collect field data, by the survey research, such as the questionnaire distributed about 400 sample group in the higher education institute, by convenience sampling.

#### 3.4.3 Triangulation of Data Strengthens

The triangulation of data occurs when multiple theories, materials or methods are used. The following are a few of the most common approaches:

- 1) Data source triangulation, using evidence from different types of data sources, such as primary and secondary research or interviews, documents, public records, photographs and observations.
- 2) Methodology triangulation, combining multiple methods to gather data, such as documents, interviews, observations, questionnaires or surveys, when conducting primary research, at different times and in different places.
- 3) Theory triangulation, using more than one theoretical approach (theory) to interpret and support data.

#### 3.5 The data Analysis

To study of documentary review for quantitative research and qualitative research, by the researcher conducted the data analysis, the focus is on the analysis of the content essentials, the content analysis is determined as following:

- 1) To documentary analysis, by analyze the literature on internal quality assurance with the curriculum in higher education institutions is curriculum/discipline. Standard of Higher Education Curriculum and the quality of assessment.
- 2) The synthesis of the interview results, by analyzing the results of each interview, and synthesize the interview results into a new knowledge. Which the qualitative data with the information obtained from interviews and information from the observers, including data from focus groups, such as information from interviews, data from observational a summary of the discussion group and research papers, by analyzing qualitative data.
- (1) Identification and Data Systems (Typology and Taxonomy) is the data collected be classified and categorized into a system, such as the personal factor or factors and the information that the interviews or observations and data from various sources.
- (2) A brief analysis of induction (Analytic Induction) as the data obtained from the analysis of the events that happened to the conclusion together on research.

- (3) Comparison of the event (Constant Comparison) is the data were comparable to or compared with other events, to explore the similarities and differences that arise, such as comparing one agency to another agency, the successful management, so on.
- (4) Analysis of components (Componential Analysis) is the data obtained from interviews and observations, the analysis of the issue as soon as the analysis of the real data or empirical data and that is the idea of specialists/experts, as well as information from technical documents, including documents, books or academic journals related.
- (5) Analysis of cause and effect (Cause and Effect Analysis) is the data derived from the analysis that the result of the analysis result. Return to that caused by certain factors, or analyzing the results of the analysis to find out that when the incident occurred, have resulted more so, etc.
- (6) Data analysis to check data as three groups, (Triangulation's Denzin 1970) to verify the accuracy of data in qualitative research called "Monitoring data centers" (Triangulation) were divided into 3 categories are 1) Monitoring the data centers (data triangulation) 2) Monitoring the researcher centers (Investigator triangulation) and 3) Monitoring the theory centers (theory triangulation)
- (6.1) Monitoring data centers with an emphasis to check data acquired from various sources, are the same or not, if all the resources that have come to the same findings the research, shows that the information obtained is correct.
- (6.2) Monitoring research centers, which focused on the check of research or data that people have discovered the same or different, if the researcher or the data, showed that all findings were very similar the research, shows that the information obtained is accurate.
- (6.3) Monitoring the triangle theory, emphasize that check the use of a variety of theories, the information is derived in the same direction or not, the researchers found that neither theory can be used the findings were the same the research, show that the information obtained is accurate.

For the analysis of qualitative data, the data from all three groups to summarize the research findings, which can see it from research level to associate professor or a research-based PhD in social sciences, at present, there appear to be many higher education institutions.

#### 3) Quantitative data Analysis

Using statistics analyses the data, the data analysis that from the questionnaire, have to choose the statistics are appropriate the data, which using statistics for analyze manner quantity data, the researcher will should know at the beginning since, creative tool researches and the experiment, (Try-out), for the quality and the accuracy have of the questionnaire already generally the filtration uses the statistics analyses the data quantity manner, have as follows...

- (1) Frequency analysis and percentage value, (Frequency and Percentage) for use explain frequent and the percentage has of the data that from the questionnaire when 1 which, be the data from personal factor of the sample, and when 2 to check the behavior of the user or kind questionnaire, Check-list.
- (2) Average example analysis, (Sample mean) for use explain the average has of the data that from the questionnaire when 3 and when 4 is asking level the opinion and contentment level of the user, analyze the value deviates the standard, (Standard deviation) for use explain the vary value has of the data that from the questionnaire when 3 and when 4 also.
- (3) Hypothesis test with t test, for compare with the difference between the male, and the female that is high class the opinion and contentment level of 2 group users the facilitator.
- (4) Hypothesis test with, One-way ANOVA: F test, for compare with something, different between opinion level and contentment level of the user who have 3 the group go up to the facilitator.
- (4.1) Independence test each other, between personal factor with the behavior of the user, serve, with c 2: test of Independent, by fix way statistics significance that 0.05 level if the test is valuable a little 0.05 more or do not be free each other, be related or affect each other or the behavior of different user show that personal factor affects the behavior of different user, but, if, the test is valuable 0.05 more than or, be free each other don't be related? Affect each other different, indicate that, the behavior of not different user etc.
- (4.2) Hypothesis test with the value is related to, (Multiple correlation), for seek the relation, between opinion level of the user, with contentment level of the user, by fix the level, way statistics significance that 0.01 level which, if, the a little

value 0.01 more have the relation, but, if, the value 0.01 more than have no the relation, by have standard level relation measurement, traditionally of Aphinant Chantanee  $(2006:7)^1$ , for use level relation temple, as follows:

by 0.01 - 0.20 have the relation in low many level

by 0.21 - 0.40 have the relation in low level

by 0.41 - 0.60 have the relation in the average

by 0.61 - 0.75 have the relation in the level rather tall

by 0.76 - 0.90 have the relation in high-level

by 0.91 - 1.00 have the relation in very high-level

4) Qualitative Data Analysis, by synthesizing content related to positive psychological factors derived from expert interviews. Which content Analysis, management to conceptualize, commentates, category, classify, by management to contents and concepts, by this is done at the same time during the research. The researcher will take the information from the notes, and transcripts from the interview, including summaries from interviews with each expert, including categorization in each variable. The information is complete and appropriate to be synthesized as a complete knowledge.

<sup>1</sup> Aphinant Chantanee, **Advance Management Research methodology**, Three Edition, Bangkok: jaransanidwong company, 2016, p.39.

### **Chapter IV**

# **Data Analysis and Interpretation**

The research in this chapter IV is analyze of the interview and questionnaire, for Internal Quality Assurance Management based on Iddhipada4 for Curriculum in Higher Education Institutions". Researcher to operate the Mixed Methods Research, by using the research methodology with mixes to collection of data from documents. Collect data from the field questionnaire, and in-depth interviews with those involved in Internal Quality Assurance for Curriculum in Higher Education Institutions, analysis results as follow:

#### 4.1 Patterns of Higher Educational Institution

For interviews, the data can be analyzed in full. The interview is divided into 3 groups.

- Group 1: Central Management Interviews (Director, Committee and Senior Lecturer) 6 persons
- Group 2: Interviews with Higher Education Administrators (Chancellors, Vice Presidents and Assistants Presidents) 10 persons
- Group 3: Executives of the Faculty (Dean, Associate Dean, Assistant Dean, Curriculum Director and educational quality assurance directors), 20 persons.

# 4.1.1 Rationale and necessity of quality assessment and curriculum standards in higher education institutions.

The need for quality assurance in higher education. The main mission of the college / institute / university. There are four aspects of production. Research, academic service to society and arts and culture preservation. These 4 missions are of great importance to the development of both short and long term. There are many internal and external factors that make quality assurance in higher education institutions necessary to accelerate.

**Group 1** Central Management Interviews<sup>1</sup> (Director, Committee and Senior Lecturer) 6 persons to be implemented by the higher education institutions to meet the standards and quality. Efficiency and Effectiveness The summary can be summarized as follows.

- 1) Quality management to produce graduates of colleges / institutes / universities. There are more differences. This has resulted in both short-term and long-term benefits for both graduates and the society. By providing public information that is beneficial to stakeholders. Students, employers, parents, the government, and the general public.
- 2) College / Institute / University There is a need to ensure that the society develops knowledge and produces graduates. To respond to the country's development strategy, such as capacity building, personnel and organizations or enterprises, and the creation of international competitiveness. Development of real sector of industry and services. Career development, quality of life, community and local life.
- 3) The Internal Quality Assurance Committee shall be established under the guidelines and guidelines for internal quality assurance in the higher education sector. Faculty and Institute Level The evaluation starts in the academic year 2557 onwards, and the curriculum is monitored every three years. The examination of the curriculum. Must follow. "Higher Education Internal Quality Assessment Guide, 2014":

Components 1 Regulatory Standards

Components 2 Graduates

Components 3 Students

Components 4 teachers

Components 5 Curriculum, Learning and Teaching, Learner Assessment

Components 6 Learning Resource

4) the Ministry of Education has issued the Notification for the Higher Education Curriculum B.E.2 5 5 8 to replace the Notification of the Ministry of Education B.E.2548 (2005). There is a problem in the implementation of the Internal Quality Assurance Board of Higher Education in 2014 and the standard of higher

<sup>&</sup>lt;sup>1</sup> Group Interviews of Director, Committee and Senior Lecturer (HEC) 6 January 2018.

education in 2015. This is the source for the "Quality Assessment and Curriculum Assessment Guidebook"

Order of the Head of National Peace Corps 39/2559 Re: Organizing and Resolving Good Governance in Higher Education Institutions Ordered on July 12, 2016 "Clause 4 The Higher Education Commission Report to the Minister of Education When it appears that the Council of higher education institutions or higher education institutions "there are cases as follows. (1) The study does not meet the standards of higher education. Or standard course It may cause damage to students, social education systems or the nation. (2) To deliberately avoid or delay the observance of laws, rules and regulations of higher education institutions. Or the order of the Minister of Education. Ordered by this order. Or legal.

To comply with internal quality assurance guidelines. Higher education in 2 0 1 4 must be classified into two periods: 2 0 0 5 (Old Criteria) and Curriculum Standards for Higher Education 2015. Which curriculum is developed or improved by 2005 (before May 11, 2016) and development / improvement. The curriculum will be assessed by the 2015 curriculum. Must understand the criteria carefully and clearly. What is the purpose of producing graduates? The TQR evaluation will focus on learning outcomes.

Compliance with quality cycle (Deming's Cycle)

Planning, beginning planning process at the beginning of the school year. The results of the previous year. Use as planning information. Data is collected from June. In case of using the traditional open-close. Or from August. The use of open-ended education systems in ASEAN.

The implementation of the plan (Doing), the operation and record the performance record from the beginning of the academic year is the first month - 12 months of the academic year.

Checking the quality of the course / department (June - August). Or between August and October. Of the next academic year)

Acting, planning, updating, and implementing improvements based on evaluation results. Course Advisory Board the recommendations and evaluations of the internal quality assurance committee were proposed to improve the implementation. Including the recommendation of the University Council. The annual

plan of action and proposed budget next year (or mid-year budget). Compliance issues with the curriculum standards.

**Group 2** Interviews with Higher Education Administrators (Presidents, Vice Presidents and Assistants Presidents) 10 persons<sup>2</sup>

# 4.1.2 The quality assessment of curriculum standards in higher education institutions.

Executive Board of Internal Quality Assurance in Institutions level. The establishment of the Quality Assurance Commission component with the president is the chairman, Vice President, Assistant President, Dean of all faculties and the Director of Educational Quality Assurance Department is secretary.

- 1 ) Plan the implementation of quality assurance, internal education and systems. Institutional Quality Assurance Mechanism.
- 2 ) Consider the standards, indicators and quality assessment of internal education of the institution. This includes the elements and indicators of educational quality assurance of the Office of the Higher Education Commission and other relevant agencies.
- 3 ) Control, monitor, monitor performance and quality of education in accordance with the standards. Indicators and criteria set by the institution. Prepare a report on the results of the monitoring to the institution's management.
- 4) Support the quality assurance of education within the institution. Courses College / College Level or equivalent units of the faculty, resulting in a qualitative quality component.
- 5) Self-assessment at the curriculum / subject level (SAR), according to the timetable for all courses (before the Board's meeting).
- 6 ) Self-assessment at Faculty level (SAR) and evaluation results and recommendations from the Faculty Board. To improve the quality of the course continuously.

<sup>&</sup>lt;sup>2</sup> Group Interviews of university administrators (Presidents, Vice Presidents and Assistant Presidents), 19 February 2018.

- 7) Prepare a self-assessment report at the curriculum level (TQF 7) at the Faculties and Institute level (SAR) through the CHE QA Online system and conduct quality assessment within the academic year.
- 8) Performance other tasks related to internal quality assurance, as assigned by the Institute.

#### For management of the curriculum to quality and standards.

- 1) Planning: Planning is the starting point for careful planning in order to be successful in the planning process. The person responsible for the assignment determines the time and resources that will be required to achieve the desired goals in accordance with the plan for the promotion and development of the annual action plan. Plan for teaching and learning according to the budget plan. It must be linked to local policies and needs.
- 2) Doing: Plan Implementation, once the institution has completed the plan, In the meantime, the school administrators must promote and support all personnel to work happily.
- 2.1) Organize facilities Support resources to ensure efficient operation and sufficient
- 2.2) Supervise the individual / department level to stimulate and promote the implementation of the plan.
  - 2.3) Provide supervision during the operation.

The school administrators must monitor and follow up the goals or plans, or have problems or not, if not in accordance with the plan or problems will be supervised to improve. There are several ways to monitor and track the performance of an organization. Organize group meetings or give each person weekly progress reports. Or monthly, which may be an oral report or a report prepared for further improvement in the performance. Management should provide supervision so that staff can perform effectively. Both in teaching and learning. Self Assessment and Skills The supervisors supervise themselves or invite guest speakers, such as supervisors, specialists, to supervise or send people to training.

3) Checking: Evaluation is an important mechanism to stimulate development, because it will provide a feedback that reflects the past performance on how to achieve that goal. What improvements must be made? Administrators and teachers

who understand the system of promoting and developing quality teaching and learning will recognize the importance of evaluation, not fear of evaluation, especially self-assessment. This is an assessment aimed at developing. It's not judgment, it's not judgment, it's not difficult to judge. No need to think of tools or assessments. It is an evaluation of the work done on a regular basis, the tools used may be an existing tool. For example, statistics on general information of academic departments, works or homework as well as sub-tests of students in the classroom are duplicates of the information that teachers already have and only store them in a systematic way.

During the implementation of the action plan should be periodically reviewed and evaluated. To consider the implementation in the direction that will lead to the achievement of goals or standards. Are there any weaknesses, strengths, and weaknesses in the development plan and action plan? To achieve the goals or standards and the most determined indicator, and at the end of the semester or the end of the academic year, it will be necessary to evaluate the results to be revised. Continue to the next phase.

4) Acting: Improvement / Development, once each personnel / department has completed the assessment, it will result in the responsible committee, which must collect the results of the evaluation, analyze the synthesis, translate the results as a whole. The results of the evaluation are presented to the relevant persons, such as teachers, counselors, teachers, subject matter leaders. Educational Manager To apply to develop their own work. The results of the evaluation may be used to organize teacher conferences within the curriculum. Education Or report the results of the short evaluation.

#### Management of curriculum quality and standards with Four Iddhipadas.

Lecturer and course coordinator Responsible and attentive to comply with curriculum standards. Have a good mind to serve the students.

- 1) Chanda: Teacher is passionate and contented with the desire to do good things, like to do so, and always want to do something better.
- 2) Viriya: Diligently strives to do things in an effort to persevere without good reason.

- 3) Citta: Teacher is determined to do what and do not mind. Let's dedicate ourselves to the metaphysical devotion dedicated to what we do.
- 4) Vimamsa: Teachers reflect on the monitoring and verification. Lose in what to do is to plan, measure, improve, solve problems.

#### Interview results to TQR system evaluation

There is no manual (as a guideline) for entering TQR, and the quality assurance system within the curriculum. The summary is as follows.

Internal Educational Quality Assurance System: Curriculum/Program of Studies Level. To produce good quality graduates with desirable characteristics, the carrying out of work and management at the curriculum level are of the utmost importance. An internal educational quality

assurance system should be provided with the following principles.

- 1) Internal educational quality assurance at the curriculum/program level, ensures that the curricular management and operations meet higher education standards and other relevant criteria. Consideration is given to vital components such as regulatory standards, graduates, students, instructors, curricula, learning and teaching, the assessment of learners, and learning resources in order to produce quality graduates.
- 2) Linking internal educational quality assurance at the curriculum or program level, and operational indicators from the Thai Qualifications Framework for Higher Education of 2009 is beneficial in the dissemination of good quality, standardized curricula, as announced by the Office of the Higher Education Commission (OHEC) in its Implementation Guidelines for the Thai Qualifications Framework for Higher Education of 2009.
- 3) Internal educational quality assurance indicators at the curriculum level are part of the common data set related to higher education curricular standards, as are quantitative indicators regarding qualifications, academic rank, and academic output of instructors. As for qualitative indicators that focus on processes, they are assessed by peer review which consists of detailed questions that form guidelines for assessors to consider according to an institution's context; these are used to devise scoring guidelines at each level for assessors and those who are being assessed.

4) Higher educational institutions may set up internal educational quality assurance systems at the curriculum level to carry out this work that are equivalent to the OHEC standards. However, each system must be approved by the institutional council and the Higher Education Quality Assurance Committee, and assessment results must be submitted to OHEC along with the common data set for disclosure to the public. Examples of internal educational quality assurance at the curriculum level which that are equivalent are AUN QA, professional program assessment results approved by an internationally recognized professional organization such as AACSB (for business administration programs), ABET (for engineering programs), and programs that have been regularly inspected, assessed, and accredited by a professional council.

For compliance with the quality assurance system within the curriculum level. Because there is no manual (that is a practice), it must be based on TQF of each curriculum. The curriculum level quality assurance system is summarized as follows.

- 1) Indicator 1.1 Regulatory Standards: 1) Number of Full-Time Program Instructors 2) Qualifications of the instructors Responsible for a Curriculum/Program of Studies. 3) Qualifications of Full-Time Program Instructors. 4) Qualifications of Teaching Instructors 5) Specified Period of Time Within Which Curriculum Must be Revised. For Master Program and Doctoral Program (See p.37 43)
- 2) Indicator 2.1 Graduate Quality in Accordance with the Thai Qualifications Framework for Higher Education; 1) Ethical and moral development; 2) Knowledge; 3) Cognitive skills 4) Interpersonal skills and responsibility 5) Analytical and communication skills.
- 3) Indicator 2.2 (Bachelor Degree Programs) Percentage of Bachelor Graduates who are Employed or Self-Employed within One Year

Bachelor degree graduates who complete regular, special, and part-time programs in their fields of study and are employed or self-employed with a regular income within 1 year of the graduation date compared to total number of graduates for that academic year. To calculate employment, count those graduates who are doing all types of honest work and earning a regular income for their livelihoods. To calculate the percentage of graduates from special or part-time programs, count only the graduates who changed jobs after graduation.

4) Indicator 2.2 (Masters Programs/Doctoral Programs) Research Output of Masters Students and Graduates that is Published. Graduate program study must consist of discovery, systematic thinking, and research that searches for credible answers. Graduates must codify their knowledge in order to create output that shows their ability to systematically use knowledge and disseminate it in beneficial ways to the public. This indicator assesses the quality of the research output of Masters Degree program graduates.

Assessment Criteria; Convert the percentage of the weighted sum of publications to graduates into a score of between 0-5; define score 5=40% or higher.

5) Indicator 2.2 (Doctoral Programs) Research Output of Doctoral Students and Graduates that is Published, or Dissertation. Doctoral program study must consist of discovery, systematic thinking, and research that researches for credible answers. Graduates must codify their knowledge in order to create output that shows their ability to systematically use knowledge and disseminate it in beneficial ways to the public. This indicator assesses the quality of the research output of Doctoral Degree program graduates.

Assessment Criteria; Convert the percentage of the weighted sum of publications to graduates into a score of between 0-5; define score 5=80% or higher

6) Indicator 3.1 Student Admissions, Indicator Type is Process a basic factor in the successful operation of a program of studies is the qualifications of students who are admitted into the program. Each curriculum has a philosophical concept in designing, and it is essential that student qualifications be set forth that are consistent with the nature of the curriculum. Student selection criteria must be transparent, clear, and in harmony with student qualifications specified in the curriculum. Tools, data, or methods are used to select students who are intellectually, physically, and emotionally ready and determined to learn, and who have adequate time to successfully complete the program of studies within the timeframe specified in the curriculum.

By show operational results covering at least the following issues:

- Student admissions

- Readiness preparations before study commences
- 7 ) Indicator 3.2 Student Support and Development, Indicator Type is Process in the first year of studies, a mechanism is required to develop basic knowledge or prepare students so that they will be ready to cheerfully learn at the higher education level with a low dropout rate. While they study, various activities to develop students' knowledge and abilities should be provided both in- and outside-of classes along with activities to promote good citizenship and a sense of public awareness. A system to care for and provide academic advising (Bachelor, Master and Doctoral) should be established, along with a system to prevent and manage student risks, so that they will be able to successfully complete their studies within the timeframes specified in the curriculum. This includes supporting the dissemination of students' academic work, providing learning opportunities to promote development of student potential, and supplying 21st century learning skills that meet international standards.

By show operational results covering at least the following issues:

- Oversight and care for academic advising and counseling for Bachelors Program students
  - Oversight and care for thesis advising for graduate students
- Development of student potential and promotion of 21st century learning skills.
- 8 ) Indicator 3.3 Results Experienced by Students, Indicator Process Indicator Description The results of quality assurance should contribute to students' readiness to learn, a high rate of student retention, a high graduation rate, and student satisfaction with the curriculum and the results of how their complaints are managed.

When reporting operations for this indicator, describe processes or show operational results for the following issues:

- Retention
- Graduation
- Student satisfaction and management of student complaints
- 9 ) Indicator 4.1 Management and Development of Instructors, Indicator Process the management and development of instructors starts with a system for recruiting new instructors that defines their qualifications in harmony with the

context, philosophy, and vision of institutions and programs. It must use suitable and transparent mechanisms for selecting instructors; furthermore, an instructor management system is required to establish policies and long-term plans to obtain instructors with the quantitative and qualitative attributes specified by curricular standards that are prescribed by the Office of the Higher Education Commission. A system to support and develop instructors is also essential, with a plan, funds, resources and activities that are carried out, along with supervising and improving the quality of instructors.

When reporting operations for this indicator, by show operational results covering at least the following issues:

- System to recruit and appoint full-time program instructors
- System to manage instructors
- System to support and develop instructors
- 10) Indicator 4.2 Instructor Quality, Indicator Type Inputs

Support and development of instructors must be undertaken so that those who teach in a program of studies will have appropriate and adequate qualifications. They must be knowledgeable, with expertise in the fields of study that are offered and suitable experience in producing graduates. This is reflected by their educational qualifications, academic rank, and progress in producing academic output on an ongoing basis.

Issues that will be considered for this indicator consist of the following:

- Percentage of full-time program instructors with doctoral degrees
- Percentage of full-time program instructors with academic rank
- Academic output of full-time program instructors
- The number of articles written by full-time program instructors in doctoral programs that have been cited in journals listed in the TCI and Scopus databases per the total number of full-time program instructors

#### 11) Indicator 4.3 Results Experienced by Instructors, Indicator Outcome

Indicator Description the results of quality assurance must lead to a level of instructor staffing that is suitable given the number of students admitted into the program, a high rate of instructor retention, and instructor satisfaction with management of the program.

When reporting operations for this indicator, describe processes or show operational results for the following issues:

- Instructor retention
- Instructor satisfaction

#### 12) Indicator 5.1 Content of Courses in the Curriculum, Indicator Process

Although all curricular programs that are offered by educational institutions must be approved by the Office of the Higher Education Commission, and updated every 5 years, administrators must take responsibility for seeing that course contents are up-to-date and keep pace with constantly changing technology. The courses offered – both required and elective – should be managed in a learner-centered manner in order to satisfy student and labor market needs.

For graduate programs, the emphasis should be in developing student research skill and self-directed learning.

When reporting operations for this indicator, describe processes or show operational results covering at least the following issues:

- The curricular design concepts, and content of courses in the curriculum
- Curricular revision to keep up with progress in the field
- 13) Indicator 5.2 Establishment of an Instructional System for Instructors and a Process for Learning and Teaching, Indicator Process

The curriculum must place importance on establishing an instructional system for each course, taking into account the knowledge, abilities, and expertise of instructors in each subject that they are assigned to teach. The knowledge imparted by instructors must be up-to-date, and students

must gain experience and develop capabilities by studying with truly knowledgeable individuals.

For graduate programs, the important issue is identification of thesis/independent study topics. The appointment of suitable thesis/independent study advisors in view of topics and student characteristics. Students should have opportunities to develop their full potential. Thesis and independent study advisors must be able to provide guidance, starting with the process of developing the topic, and throughout the time that it is being written, defended, and the research results are disseminated until graduation.

When reporting operations for this indicator, describe processes or show operational results covering at least the following issues:

- Instructor teaching assignments
- Supervising, monitoring, and inspecting preparation of learning plans (TQF 3 and TQF 4); learning/teaching management
- Learning/teaching management in bachelor programs that integrates research, academic service to society and preservation of arts and culture
- Supervising graduate program thesis and independent study topics so they correspond with fields of study, and progress in academic disciplines.

#### 14) Indicator 5.3 Learner Assessment, Indicator Process

There are 3 main purposes of learner assessment. The first is to provide useful data/ information to improve the instructor's teaching, which leads to improvements in student learning (assessment for learning). The second purpose of assessment allows students to evaluate their own progress, and use the results to develop new study methods that lead to learning (assessment as learning). The third purpose is to assess expected curricular learning outcomes (assessment of learning). Most assessment is used for the last purpose, which is focused on providing data regarding student learning achievements. Learning and teaching management should encourage assessment for the first two aims as well. Thus, appropriate assessment systems must place importance on creating assessment criteria, assessment methods, quality assessment tools, and grading methodologies that aptly reflect learning outcomes. Supervision is necessary to bring about authentic assessment, use of a variety of assessment methods, assessment results that reflect ability to operate in the real world, and feedback which enables students to resolve their weaknesses and reinforce their strengths. Such assessment results will reflect students' actual abilities. Graduate programs must give priority to establishing quality systems to assess theses and independent study projects.

When reporting operations for this indicator, describe processes or show operational results covering at least the following issues:

- Assessment of learning outcomes according to the Thai Qualifications Framework of Higher Education
  - Verification of the assessment of student learning outcomes

- Regulate the assessment of teaching management and curriculum assessment (TQF 5, TQF 6, and TQF 7)
  - Assessment of theses and independent study projects in graduate programs
- 15) Indicator 5.4 Curriculum Operational Results According to the Thai Qualifications Framework for Higher Education, Indicator Outcome

The results of curricular operations means the percentage of operational indicators in the Thai Qualifications Framework for Higher Education; listed in the curriculum document (TQF 2), Section 7, Item 7, which are fulfilled each academic year. The full-time program instructors report the annual operational results in the form of a curricular performance report (TQF 7).

Assessment Criteria The percentage of annual indicators achieved is less than 80%, which receives a score of 0. The percentage of annual indicators achieved is 80%, which receives a score of 3.50.

The percentage of annual indicators achieved is between 80.01-89.99%, which receives a score of 4.00.

The percentage of annual indicators achieved is between 90.00-94.99%, which receives a score of 4.50.

The percentage of annual indicators achieved is between 95.00-99.99%, which receives a score of 4.75.

The percentage of annual indicators achieved is 100% ,which receives a score of 5.00.

#### 16) Indicator 6.1 Learning Resources, Indicator Process

Many kinds of readiness to support learning are needed: for example, physical facilities, such as classrooms, laboratories, student resting area, etc; availability of equipment, technology, and facilities or resources that facilitate learning, such as teaching equipment, library, books, textbooks, publications, journals, databases, learning resources, electronic media, etc. Learning support facilities must be adequate in number, of good quality, ready for use, and up-to-date. Operational improvements are appraised based on student and instructor satisfaction assessment results.

When reporting operations for this indicator, describe processes or show operational results covering at least the following issues:

- Operational systems of Programs/Faculties/Institution, with participation of full-time program instructors in order to provide learning resources
- Number of learning support items that are adequate and suitable for managing learning and teaching
- Process of making improvements per student and instructors satisfaction assessment results of learning resources.

#### The Board of Education Quality Assurance in Faculties level.

The committee for internal quality assurance within the curriculum and the Faculties component with each Dean is the Chairman, Deputy Dean for Quality Assurance and the quality assurance supervisor in each faculties, as follows.

- 1) Plan the implementation of internal quality assurance and internal quality assurance mechanisms of the college / university, and the Curriculum / Programs.
- 2) Perform internal quality assurance work according to the internal quality assurance plan. The system and internal quality assurance mechanisms are defined at the academic level.
- 3 ) Resource allocation to support quality assurance activities at the curriculum / Programs level. The results of the components and indicators clearly.
- 4) Supervision, monitoring, performance monitoring, quality assurance at the curriculum / Programs level. Follow the elements and indicators. Report the results to the Board for consideration.
- 5 ) Supervise all courses / disciplines to prepare a self-assessment report (SAR) for annual appraisal, study and send CHE QA Online.
  - 6) Applying the curriculum quality assessment (SAR) within the curriculum.
- 7) The quality of education within the curriculum / programs (SAR) and faculties / college level every academic year, and send the self-assessment report (SAR) to the Institute Council for consideration.
  - 8) Preparation of internal quality assurance guidelines for each Faculties.
- 9) Other activities related to internal quality assurance, as assigned by the Institutes.

**Group 3:** Interviews with Quality Assurance Program Instructors (Dean, Deputy Dean, Assistant Dean, Curriculum Director and Director of Educational Quality Assurance) 20 persons<sup>3</sup>

## 4.1.3 Supervise and monitor the evaluation of teaching and learning in the curriculum. Quality and standard

The curriculum management are the quality and standard compliance Four Iddhipadas. Lecturer and course coordinator Responsible and attentive to comply with curriculum standards. Have a good mind to serve the students:

The curriculum management is of the quality and standard of Four Iddhipadas, Lecturer and course coordinator Responsible and attentive to comply with curriculum standards. Have a good mind to serve the students.

1) Chanda of instructors: passionate and contented with the desire to do good things, like to do so, and always want to do something better. Satisfaction caused by love or like in the preliminary. It stimulates thinking and planning. As well as systematic design. Curriculum Planning in Higher Education Institutions To ensure that the education of the higher education institutions is as good as the curriculum. The principle is to encourage people to invent and plan for good quality. Satisfaction of the instructors on the quality assurance within the curriculum. The school plans and systems for quality assurance. Deputy Dean for Quality Assurance Supervise each subject. And within the Faculty has appointed a quality team with the Faculty. There are representatives from all disciplines. Coordinated with and supervised the quality assurance of the school. Therefore, the faculty can drive quality assurance as well. The faculty is responsible for training the instructors in the curriculum to understand the elements and indicators of quality assurance in curriculum standards and quality in teaching and learning in the curriculum. Track and evaluate To prepare for the assessment in every academic year. The emphasis is on the teacher to develop skills and knowledge to students who can achieve the quality and standards.

2) Viriya of instructors: diligently strives to do things in an effort to

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<sup>&</sup>lt;sup>3</sup> Group Interviews of Executives of the Faculty (Dean, Vice Dean, Assistant Dean, Curriculum Director and educational quality assurance directors), 2 March 2018.

persevere without good reason. - Diligent effort to make quality assurance meet the target. The curriculum is taught in accordance with the objectives of the curriculum set forth in the TQF.2 and to develop textbooks and research for quality and to enhance the students' learning experience. Most faculty to work in teaching students to gain knowledge and experience. The teaching is very important. Students are responsible for their responsibility. The instructor will have teaching materials that meet the requirements of the TQF.3 and the evaluation according to the TQF.5 the every subject by meeting in each field to drive the quality assurance in the field they are responsible. The use of the principle is persistence. Do you want to know? Because it is known that the map has determined what to do. The plan is clearly visible. Encourage the diligent work. I will try to keep up with it.

- 3) Citta of instructors: determine to do what, do not mind. Let's dedicate ourselves to the dedication of the mind-set based on the principle it's a continuation of the persistence. When working diligently. Control the work around to avoid mistakes. Or minimal error the results of this study are as follows. Walk to plan as intended. Quality control always. Achievement is the standard of graduate school that requires quality and standardized output. As the quality assurance supervisor of the curriculum and the university. The teacher must be mentally focused on both teaching and quality assurance courses and faculty. The school has organized quality assurance trainers who are responsible for the courses that focus on the teacher's service. It is sincere to remember that the graduates with knowledge and moral. Instruct the curriculum staff to have a good understanding of data integration and follow the curriculum quality assurance guidelines. The school has a policy to ensure the quality of the course as a clear indicator. The school has a meeting to oversee. Follow every month and evaluation of teaching and learning continuously every semester.
- 4) Vimamsa of Instructors: reflect on the monitoring and verification. Lose in what to do is to plan, measure, improve, solve problems. There is an urge to understand the work plan. Take control of the quality well. Which was analyzed. Check the results of the course objectives specified in the thesis. As instructors, they will have to improve the teaching and learning to be consistent and consistent. The curriculum quality assurance guideline for successful graduates to go to the labor market with quality and meet the needs of agencies and entrepreneurs in teaching and

learning in the school The University's policies and monitoring and evaluation of teaching and learning are strictly adhered to. Focus on each teacher to teach on time. And teach the content and time of the course in each semester. All teaching materials are self-taught. To use in teaching throughout the course. Quality of teaching by students there are meetings to discuss defects or how to prevent mistakes. Have a meeting with experts to review the course in each semester.

To summary, the main of Four Iddhipadas, are Chanda, Viriya, Citta, Vimamsa, so it is a fellowship of Dharma, which is a common practice that is continuous cycle of quality, love work, so diligent and diligently work. Last must around always check the work, so if the faculty use Four Iddhipadas. quality of curriculum / program will be successful in the futures.

#### **4.1.4 Compliance with quality cycle** (Deming's Cycle)

Planning: beginning planning process at the beginning of the school year. The results of the previous year. Use as planning information. Data is collected from June. In case of using the traditional open-close. Or from August. The use of open-ended education systems in ASEAN.

Doing: the implementation of the plan, the operation and record the performance record from the beginning of the academic year is the first month - 12 months of the academic year.

Checking: the quality of the course / department (June - August). Or between August and October. Of the next academic year)

Acting: planning, updating, implementing improvements based on evaluation results. Course Advisory Board the recommendations and evaluations of the internal quality assurance committee were proposed to improve the implementation. Including the recommendation of the University Council. The annual plan of action and proposed budget next year (or mid-year budget).

Quality assurance is the guarantee of the organization that the product or service has been adhered to acceptable quality standards. By what does "quality" mean in context? Identify methods that can be verified. Identify and measure ways to ensure consistency.

#### The Board of Education Quality Assurance in Faculties level.

The committee for Internal quality assurance within the curriculum and the Faculties component with each Dean is the Chairman, Vice Dean for Quality Assurance and the quality assurance supervisor in each faculties, as follows.

- 1) Plan the implementation of internal quality assurance and internal quality assurance mechanisms of the college / university, and the Curriculum / Programs.
- 2) Perform internal quality assurance work according to the internal quality assurance plan. The system and internal quality assurance mechanisms are defined at the academic level.
- 3 ) Resource allocation to support quality assurance activities at the curriculum / Programs level. The results of the components and indicators clearly.
- 4) Supervision, monitoring, performance monitoring, quality assurance at the curriculum / Programs level. Follow the elements and indicators. Report the results to the Board for consideration.
- 5 ) Supervise all courses / disciplines to prepare a self-assessment report (SAR) for annual appraisal, study and send CHE QA Online.
  - 6) Applying the curriculum quality assessment (SAR) within the curriculum.
- 7) The quality of education within the curriculum / programs (SAR) and faculties / college level every academic year, and send the self-assessment report (SAR) to the Institute Council for consideration.
  - 8) Preparation of internal quality assurance guidelines for each Faculties.
- 9) Other activities related to internal quality assurance, as assigned by the Institutes.

## Important issues in assessing access to (publishing) the TQR system is summarized as follows.

Indicator 1.1 Regulatory Standards: 1) Number of Full-Time Program Instructors 2) Qualifications of the instructors Responsible for a Curriculum/Program of Studies. 3) Qualifications of Full-Time Program Instructors. 4) Qualifications of Teaching Instructors 5) Specified Period of Time Within Which Curriculum Must be Revised. For Master Program and Doctoral Program.

Indicator 2.1 Graduate Quality in Accordance with the Thai Qualifications Framework for Higher Education; 1) Ethical and moral development; 2) Knowledge;

3) Cognitive skills 4) Interpersonal skills and responsibility 5) Analytical and communication skills.

Indicator 2.2 (Bachelor Degree Programs) Percentage of Bachelor Graduates who are Employed or Self-Employed within One Year: are the percentage of bachelor graduates who get a job or pursue an independent career within one year, by completing the course specified in the curriculum objectives (TQF.2)

Indicator 3.2 Student Support and Development, Development of student potential and promotion of 21st century learning skills, consider the big picture and overall operational results of helping students to cheerfully learn essential skills for their future professions.

Indicator 4.1 Management and Development of Instructors, 1) System to recruit and appoint full-time program instructors 2) System to manage instructors 3) System to support and develop instructors, such as the system and mechanism for selection of professors, as well as the risk management plan. Assign roles and responsibilities of lecturers.

Indicator 4.2 Instructor Quality,

Assessment Criteria: Convert the percentage of full-time program instructors with Doctoral Degrees into a score of between 0-5.

- Bachelors Degree Programs; The percentage of full-time program instructors with Doctoral Degrees is defined as 5 = 20% or higher.
- Masters Degree Programs; The percentage of full-time program instructors with Doctoral Degrees is defined as 5 = 60% or higher.
- Doctoral Programs; The percentage of full-time program instructors with Doctoral Degrees is defined as 5 = 100%.

Assessment Criteria: Convert the percentage of full-time program instructors with academic rank into a score of between 0-5.

- Bachelors Degree Programs The percent of full-time program instructors with rank of Assistant Professor, Associate Professor, and Professor combined is defined as 5 = 60% or higher.
- Masters Degree Programs The percent of full-time program instructors with rank of Assistant Professor, Associate Professor, and Professor combined is defined as 5 = 80% or higher.

- Doctoral Degree Programs The percent of full-time program instructors with rank of Assistant Professor, Associate Professor, and Professor combined is defined as 5 = 100%.

#### Assessment Criteria:

- Bachelors Degree Programs, Percentage of the weighted sum of academic output produced by full-time program instructors is defined as 5 = 20% or higher.
- Masters Degree Programs, Percentage of the weighted sum of academic output produced by full-time program instructors is defined as 5 = 40% or higher.
- Doctoral Degree Programs, Percentage of the weighted sum of academic output produced by full-time program instructors is defined as 5 = 60% or higher.

Number of Articles by Full-Time Doctoral Programs Instructors Cited by Journals in the TCI and Scopus Databases per Number of Full=Time Programs Instructors, by Doctoral level program offered by educational institutions. These important programs that emphasize the creation of new knowledge that is beneficial in national development; thus, full-time program instructors in doctoral programs are very important to their programs of study.

Indicator 5.2 Establishment of an Instructional System for Instructors and a Process for Learning and Teaching, .

When reporting operations for this indicator, describe processes or show operational results covering at least the following issues:

- Instructor teaching assignments
- Supervising, monitoring, and inspecting preparation of learning plans (TQF 3 and TQF 4); learning/teaching management
- Learning/teaching management in bachelor programs that integrates research, academic service to society and preservation of arts and culture
- Supervising graduate program thesis and independent study topics so they correspond with fields of study, and progress in academic disciplines
- Appointing graduate program thesis and independent study advisors who have knowledge and expertise in harmony with/related to thesis topics
- Assisting, overseeing, and following up the production of theses and independent study projects, and publication of research results in graduate programs

Indicator 5.3 Learner Assessment, when reporting operations for this indicator, describe processes or show operational results covering at least the following issues:

- Assessment of learning outcomes according to the Thai Qualifications Framework of Higher Education
  - Verification of the assessment of student learning outcomes
- Regulate the assessment of teaching management and curriculum assessment (TQF 5, TQF 6, and TQF 7)
- Assessment of theses and independent study projects in graduate programs
  Indicator 6.1 Learning Resources, When reporting operations for this
  indicator, describe processes or show operational results covering at least the
  following issues:
- Operational systems of Programs/Faculties/Institution, with participation of full-time program instructors in order to provide learning resources
- Number of learning support items that are adequate and suitable for learning and teaching
- Process of making improvements per student and instructors satisfaction assessment results of learning resources

#### Ex. Compliance of TQR, Program in Thai Language<sup>4</sup>

Summarize the quality of the students, and the learning outcomes of the Thai language course for communication. Faculty of Humanities and Social Sciences, Phuket Rajabhat University.

Thai Language course for Communication, Faculty of Humanities and Social Sciences, Phuket Rajabhat University. The curriculum is updated in 2012, there are 5 full-time lecturers responsibility for the curriculum, which have qualification and qualified by criteria of the curriculum, including has a mission of The University to be fully effective. The teaching and learning, academic Services, to maintain the arts and culture. Including research, publishing national and international research programs.

<sup>&</sup>lt;sup>4</sup> Faculty of Humanities and Social Sciences, Phuket Rajabhat University, 2016.

Thai Language for Communication, the management for the teaching and learning is based on TQF.2. the emphasis to quality of learners and the learning outcomes of the program (Program Learning Outcomes), which focus on the quality of learners and the learning outcomes of the curriculum. The curriculum have monitoring the learning outcome and learning quality of students from the Student Handbook of the Thai Language for Communication. To use the track Controlling both academic activities, characteristics, and learning skills of students. Which the lecturer responsibility the curriculum is used as a guide to student learning. Understanding, solving problems, promoting and developing.

Students are individually responsible for their potential. In addition, the guide also provides students with a way to study the activities and use them as a guide for self-improvement. Concrete in addition, the program also publishes "Wannaya magazine", a journal that is continuously produced for 1 0 years, four times a year, to provide students with the opportunity to present their writings processed from the knowledge acquired both in and out of curriculum.

Both internal and external journals are published and external universities. It is a proud work for students. There is also a wide range of knowledge to the needs of students. On the advice of alumni, users graduates, as well as experts. For students to have knowledge. Have skills that the needs of the organization. There are activities that focus on the students to complete all the steps to leave the experience throughout the 4 years of professional experience inside and external universities to leave the work.

In doing so, the curriculum has been evaluated to analyze problems, good points, weaknesses, to find ways to improve continuously, by the aim of improving the students' quality through the process and the quality of pocus the students. As a result, the graduates of the Thai language to communicate, There are 100.00% work done, which generates major work directly with the subject. It also has a tendency to enter the job easily. The any organization also need document staff, documentation, the secretarial work, and the reflection of the organization. Be qualifications required by the organization, such as there are moralities, ethics, volunteerism, responsibility, kindness, patience, ability to work and can adapt to colleagues as well.

#### 4.1.5 The problem of accordance with the Internal Quality Assurance

- 1) According to ISCED 2011, ISCED 2013 designated a relative branch. With some truth, the majors Very low
- 2) Assignment of lecturer / curriculum Not clear. Lecturer responsible for undergraduate courses Applicants will be able to use either 5 full-time graduates or 3 full-time associate professors. 2 students (2 in 5) or other.

For graduate students will be able to use either three or more graduates who are related to the subject area. Applicants must have at least 2 years of relevant experience in a field of study.

- 3) Interrelated / non-relational fields of interpretation Some staff interpreted not according to ISCED 2011, ISCED 2013, which made the lecturer responsible for the course / subject. Uncertainty
- 4) Based on the curriculum assessment criteria, 2014 is not covered / not clear. The auditors interpreted differently, such as experienced instructors.
- 5) Preparation of "Teaching Documents / Doctrinal Documents" admission to Academic Positions (Assist. / Assoc.), But not assigning points. Research articles / academic articles. This will be used for teaching in very few subjects. I do not use it.
- 6) The problem of compliance with the quality system (PDCA), which both teachers and practitioners follow, auditors of the curriculum / department.
- 7) Problems / Curriculum More than 1 teaching in the school. Report in the throat. 7 in the same set. They cannot be classified as quality indicators 2.1, 2.2, 3.1, 3.2, 4.1, 4.2, 5.2, 5.3 and 6.1.

### 4.2 Quantitative data analysis

The symbols represent the following meanings. (Aphinant Chantanee, 2011: 48) For symbols used in data analysis, the symbols in the analysis data.

 $\overline{X}$  = The average of satisfaction

S.D. = The standard deviateon

t = t - test,

F = F - test

\* = 0.05 (use t-test and F-test)

\*\* = The statistical significance level 0.01 (use to multiple correlation)

### Part 1: Analysis of personal factors of the sample groups:

Sex, age, education, position, status and status, Frequency and percentage distribution, by there are 400 person of sample group, to study the process of Internal Quality Assurance in Higher Education Institutions, the details are as follows:

**Table 4.1** Shows the number and percentage of samples who are quality assurance staffs.

Course or lecturer and Chief / Chair of Curriculum In higher education institutions

(n=400)

Danganal Changetonistics	frequency	Percentage
Personal Characteristics	400	100
1. Gender		
Male	220	55.00
Female	180	45.00
Total	400	100
2. Age (year)		
Up to 25 years	12	3.00
26 - 35	119	29.65
36 - 45	146	36.55
46 - 55	83	20.80
56 and over	40	10.00
Total	400	100
Educational background		
Bachelor	48	12.00
Master.	228	57.00
Ph.D.	116	29.30
Others (diploma)	8	1.80
Total	400	100
Positions		
Personal to IQA(SAR)	28	7.00
Teacher/Instructors	219	54.80
Head/Chairman of Program	83	20.80
Other (please specify)	70	17.50

Total	400	100
Marital status		
Single	166	41.50
Monk/Bhikkhu	46	11.50
married (living together).	160	40.00
Married (separated)	28	7.00
widowed/divorced		
Total	400	100

From table 4.1, the results of the data analysis from the sample groups, most of the samples were male 220 persons, this is 45.00%, distance 36-45 years, number 146 persons, this is and marital status as single 166 persons, this is 41.50%

Part 2 Analyzing opinions on compliance quality cycle. (n = 400)

**Table 4.2** Average  $(\overline{X})$ , Standard Deviation (S.D.), the opinion on compliance quality cycle.

The opinion of sample group on compliance quality	Opinion level		el
cycle (PDCA: Deming's cycle)	$\overline{X}$	S.D.	Interpret
1.Planning			
1.1 Quality Assurance Department has the patriotic			
to quality assurance planning. The study clearly sets the	3.63	.899	Very
committee responsible for educational quality			
assurance			
1 . 2 Quality Assurance Department has clearly	3.69	.883	Very
determined quality components and the assessment			
clearly criteria.			
1 . 3 The quality assurance department has			
documented arrangement and manual the educational	3.71	.857	Very
quality assurance, to all levels of personnel to guideline			
the implementation of educational quality assurance.			
1 . 4 All levels of personnel has participation in the	3.51	.926	Very
planning the implementation of educational quality			
assurance.			
1.5 The quality assurance department has	3.63	.848	Very
determination for guidelines is practice and internal			
quality assessment objectives clearly.			
Total	3.64	.824	Very

From table 4.2, the results of the data analysis, the opinion on compliance quality cycle (PDCA), by average in high level ( $\overline{X}=3.64$ ), when consider the item is 1.3 The quality assurance department has documented arrangement and manual the educational quality assurance, to all levels of personnel to guideline the implementation of educational quality assurance, there is average 3.71, and the item is 1.4 All levels of personnel has participation in the planning the implementation of educational quality assurance, there is low average, 3.51.

**Table 4.3** Average  $(\overline{X})$ , Standard Deviation (S..D.), the opinion on compliance quality cycle.

The opinion on quality cycle compliance	C	pinion lev	el
(PDCA: Deming's cycle)	$\overline{\mathbf{X}}$	S.D.	Interpret
2. Doing			
2.1 Action plan for educational quality assurance in			
the curriculum level, Instructors have the diligence to	3.62	.879	Very
implement it as planned always.			
2.2 The quality assurance department there is the			
public relation by the operation plan to the educational	3.54	.886	Very
quality assurance for the personnel concern with the			
educational quality assurance all level, to percept prior			
to implementation.			
2.3 The quality assurance department there is the			
conducts to the educational quality assurance to follow	3.69	.889	Very
the component and evaluation criteria determine in the			
plan and Educational Quality Assurance Manual.			
2.4 The quality assurance department there is			
promoted and supporting the facility to the personnel	3.59	.880	Very
convenience to work smoothly and efficiently.			
2.5 Quality assurance department there is the personnel			
or groups to prepare documents and any evidence to	3.49	.884	Very
relate, cover the component to mission with the			
assigned to inspection and the quality assessment of the			
curriculum.			
2.6 The quality assurance department there is conducts			
a self-assessment report (SAR) that matches the actual	3.62	.847	Very
situation.			
Total	3.59	.878	Very

From table 4.3, the results of the data analysis, the opinion on compliance quality cycle (PDCA), by average in high level ( $\overline{X}=3.59$ ), when consider the item is 2.3 The quality

assurance department there is the conducts to the educational quality assurance to follow the component and evaluation criteria determine in the plan and Educational Quality Assurance Manual. Is 3.69, and the item is 2.5 Quality assurance department there is the personnel or groups to prepare documents and any evidence to relate, cover the component to mission with the assigned to inspection and the quality assessment of the curriculum, there is low average, 3.49.

**Table 4.4** Average  $(\overline{X})$ , Standard Deviation (S.D.), the opinion on compliance quality cycle.

The opinion on quality cycle compliance	(	Opinion leve	el
(PDCA: Deming's cycle)	$\overline{X}$	S.D.	Interpret
3. Checking			
3.1 The quality assurance department there is pay			
attention to control for monitoring and supervising the	3.54	.897	very
implementation of educational quality assurance in the			
curriculum is the continuous intermittently.			
3.2 The quality assurance department there is the			
internal quality assurance committee, the knowledge.	3.65	.828	very
Ability and skill in auditing.			
3.3 During quality assurance, personnel and			
instructors to participated in providing data factual to	3.62	.910	very
the audit team.			
3.4 All level personal in the educational institute to			
co-operate for receive the Educational Quality	3.59	.908	very
Assurance audit.			
3.5 Quality Assurance Department is ready to receive			
the educational quality assurance.	3.60	.898	very
3.6 The quality assurance department there is doing			
the self-assessment report, request the educational	3.69	.879	very
quality assessment.			
Total	3.62	.887	very

From table 4.4, the results of the data analysis, the opinion on compliance quality cycle (PDCA), by average in high level ( $\overline{X}=3.62$ ), when consider the item is 3.6 The quality assurance department there is doing the self-assessment report, request the educational quality assessment. Is 3.69, and the item is 3.1 The quality assurance department there is pay attention to control for monitoring and supervising the implementation of educational quality assurance in the curriculum is the continuous intermittently, there is low average, 3.54.

**Table 4.5** Average  $(\overline{X})$ , Standard Deviation (S.D.), the opinion on compliance quality cycle.

The opinion on quality cycle compliance	(	Opinion leve	el
(PDCA: Deming's cycle)	$\overline{\mathbf{X}}$	S.D.	Interpret
4. Acting			
4.1 The quality assurance department there is			
considered to ponder the results of the quality	3.61	.863	very
assurance the curriculum or Faculty, to personnel at all			
levels know the weaknesses - strong points by the			
follow truth and clearly.			
4.2 The instructors to take Information for reports the			
self-assessment (SAR) to improve and develop the	3.55	.897	very
responsible work.			
4.3 The quality assurance department has taken the			
consider results and recommendations of the annual	3.63	.883	very
year to quality assessment committee to plan for the			
next year of study.			
4.4 The quality assurance department set up indicators			
to evaluate the success of the implementation of the	3.61	.894	very
annual year plan clearly.			
4.5 The quality assurance department has the consider			
to take evaluated in the planning to improve and	3.62	.868	very
develop in the next semester is better.			
Total	3.61	.881	very

From table 4.5, the results of the data analysis, the opinion on compliance quality cycle (PDCA), by average in high level ( $\overline{X}=3.61$ ), when consider the item is 4.3 The quality assurance department has taken the consider results and recommendations of the annual year to quality assessment committee to plan for the next year of study, Is 3.63, and the item is 4.2 The instructors to take Information for reports the self-assessment (SAR) to improve and develop the responsible work., there is low average, 3.55.

**Table 4.6** Concluding of average ( $\overline{X}$ ), Standard Deviation (S.D.), the opinion on compliance quality cycle: (PDCA).

The opinion on quality cycle compliance	Opinion level		
(PDCA: Deming's cycle)	$\overline{X}$	S.D.	Interpret
1. Planning	3.64	.824	very
2. Doing	3.59	.878	very
3. Checking	3.62	.887	very
4. Acting	3.61	.881	very
Total	3.62	.881	very

From table 4.6, by the conclusion of the results of the data analysis, the opinion on compliance quality cycle (PDCA), average planning is 3.64, average Checking is 3.62, averages Acting is 3.61 and average doing 3.59.

### Part 3 Analysis of opinion on compliance Four Iddhipadas

**Table 4.7** Average ( $\overline{X}$ ), Standard Deviation (S.D.), the opinion on compliance Four Iddhipadas.

The opinion of sample group on compliance	(	pinion lev	el
Four Iddhipadas	$\overline{\mathbf{X}}$	S.D.	Interpret
1. Chanda:			
1.1 You are satisfied that you have participated in the			
quality assurance plan at the curriculum level and	3.63	.951	very
assessed the quality of the course or subject.			
1.2 You have participated in the plan to promote and			
develop academic papers and academic administration	3.59	.919	very
for curriculum development.			
1.3 You participate in quality assurance activities at			
the curriculum or department level.	3.69	.862	very
1.4 You participate in the quality assurance program			
at the curriculum level and answer or answer the	3.73	.913	very
questions of the evaluation committee.			
1.5 You are satisfied with the implementation of the			
plan of personnel management and budget at the	3.55	.836	very
Faculty / Institute level.			
1.6 You are ready to improve and develop quality			
assurance at the curriculum or subject level.	3.72	.879	
Total	3.65	.893	very

From table 4.7, the results of the data analysis, the opinion on compliance Four Iddhipadas, by average in high level ( $\overline{X}=3.65$ ), when consider the item is 1.4 You participate in the quality assurance program at the curriculum level and answer or answer the questions of the evaluation committee. You participate, there is 3.73, and the item is 1.5 You are satisfied with the implementation of the plan of personnel management and budget at the Faculty / Institute level, there is low average, 3.55.

**Table 4.8** ค่าเกลี่ย ( $\overline{X}$ ), Standard Deviation (S.D.), the opinion on compliance Four Iddhipadas.

The opinion of sample group on compliance	Opinion level		el
Four Iddhipadas	$\overline{\mathbf{X}}$	S.D.	Interpret
2. Viriya:			
2.1 You are diligent in implementing quality			
assurance programs to ensure continuous quality.	3.64	.849	Very
2.2 Attempts at continuous quality assurance			
activities and links to academic management plans in	3.71	.893	Very
the faculty.			
2.3 You are committed to reviewing and evaluating			
the quality assurance activities of the curriculum /	3.70	.881	Very
department.			
2.4 You are committed to developing the teaching /			
learning materials for the courses in the academic	3.76	.886	Very
quality.			
2.5 You have the diligence to improve the quality of			
academic work to be able to hold academic positions at	3.73	.883	
a higher level.			
Total	3.71	.878	Very

From table 4.8, the results of the data analysis, the opinion on compliance Four ddhipadas, by average in high level ( $\overline{X}=3.71$ ), when consider the item is 2.4 You are committed to developing the teaching / learning materials for the courses in the academic quality, there is 3.76, and the item is 2.1 You are diligent in implementing quality assurance programs to ensure continuous quality, there is low average, 3.64.

**Table 4.9** Average  $(\overline{X})$ , Standard Deviation (S.D.), the opinion on compliance Four Iddhipadas.

The opinion of sample group on compliance	Opinion level		el
Four Iddhipadas	$\overline{\mathbf{X}}$	S.D.	Interpret
3. Citta:			
3.1 You are constantly concentrating on examining			
the curriculum quality assurance plan and regularly	3.66	.843	Very
follow the indicator.			
3.2 You have the responsibility to improve and			
develop your academic or documentary work	3.69	.867	Very
continuously.			
3.3 Always pay attention to the implementation of the			
plans and components and the quality assurance	3.74	.844	Very
curriculum and the faculty.			
3.4 You have continued care in following the quality			
assurance guidelines for education within the	3.73	.833	Very
curriculum and the curriculum.			
3.5 You consistently monitor and evaluate the			
performance of the components and the quality	3.68	.850	Very
assurance indicators.			
Total	3.71	.845	Very

From table 4.9, the results of the data analysis, the opinion on compliance Four ddhipadas, by average in high level ( $\overline{X}=3.71$ ), when consider the item is 3.3 Always pay attention to the implementation of the plans and components and the quality assurance curriculum and the faculty, there is 3.74, and the item is 3.1 You are constantly concentrating on examining the curriculum quality assurance plan and regularly follow the indicator, there is low average, 3.66.

**Table 4.10** Average ( $\overline{X}$ ), Standard Deviation (S.D.), the opinion on compliance Four Iddhipadas.

The opinion of sample group on compliance	C	Opinion leve	el
Four Iddhipadas	$\overline{X}$	S.D.	Interpret
4. Vimamsa:			
4.1 You have to ponder the plan to use the quality			
assurance curriculum and improve each school year	3.68	.843	Very
continuously.			
4.2 You have an analysis to perform the task			
according to the academic plan clearly. Prepare	3.62	.887	Very
documents or textbooks and research papers.			
4.3 You have to improve / modify or develop upon			
the examination and evaluation of the quality and	3.67	.882	Very
standards of the academic year.			
4.4 You have the means to improve and develop			
curricula or disciplines to be able to enter the standards	3.63	.892	Very
for registration in the TQR system.			
4.5 You are considering to review the quality			
assurance plan at the curriculum level or higher.	3.69	.885	Very
4.6 You have the means to improve or modify and			
develop the curriculum or discipline of quality and	3.71	.851	Very
standards continuously and consistently.			
Total	3.66	.873	Very

From table 4.10, the results of the data analysis, the opinion on compliance Four ddhipadas, by average in high level ( $\overline{X} = 3.66$ ), when consider the item is 4.6 You have the means to improve or modify and develop the curriculum or discipline of quality and standards continuously and consistently, there is 3.71, and the item is 4.2 You have an analysis to perform the task according to the academic plan clearly. Prepare documents or textbooks and research papers, there is low average, 3.62.

**Table 4.11** Conclusion Average  $(\overline{X})$ , Standard Deviation (S.D.), the opinion on compliance Four Iddhipadas.

The opinion of sample group on compliance	Opinion level		
Four Iddhipadas	$\overline{X}$	S.D.	interpret
1. Chanda	3.65	.893	very
2. Viriya	3.71	.878	Very
3. Citta	3.70	.845	Very
4. Vimamsa	3.66	.873	Very
Total	3.68	.881	Very

From table 4.11 by the conclusion of the results of the data analysis, the opinion on compliance Four Iddhipadas, average Viriya is 3.71, average Citta is 3.70, average Vimamsa 3.66 and average Chanda 3.65.

# Part 4 Comparing the opinions of the sample groups on the quality cycle and Four Iddhipadas, by there is hypothesis for the test as follow:

 $H_0$ : The individual factors of the sample group differed with the level of opinion level on compliance Quality Cycle and Four Iddhipadas are not different.

 $H_1$ : The individual factors of the sample group differed with the level of opinion level on compliance Quality Cycle and Four Iddhipadas are different.

**Table 4.12** The average test to compare the level of opinion on compliance quality cycle and Four Iddhipadas.

Quality cycle and	Opinion level						
Four Iddhipadas	Male (n= 220) Female (n= 180)		t	Sig.			
	$\overline{X}$	S.D.	$\overline{X}$	S.D.	ι	Sig.	
Quality cycle							
1. Planning	3.67	.749	3.59	.764	.999	.318	
2. Doing	3.64	.758	3.53	.742	1.467	.143	
3. Checking	3.64	.757	3.58	.784	.693	.489	
4. Acting	3.59	.777	3.63	.803	414	.679	
Four Iddhipadas							
1. Chanda	3.68	.762	3.62	.763	.704	.482	
2. Viriya	3.76	.770	3.65	.823	1.410	.159	
3. Citta	3.75	.764	3.64	.763	1.407	.160	
4. Vimamsa	3.72	.766	3.60	.795	1.422	.156	

Note: \* Independent t-test is significant at the 0.05 level

From table 4.12, data analysis result with Independent t-test as significant at the 0.05 level, by Sig. more than is defined significant at the 0.05 level, 8 points showed that the opinion of sample group of male and female have opinion to compliance quality cycle and Four Iddhipadas, are not different.

**Table 4.13** Variance testing to compare the opinions of the sample groups of the quality cycle (PDCA), Classified by age.

Quality cycle	Variance	SS	df	MS	F	Sig.
1. Planning	Between groups	11.537	4	2.884	5.259	.000*
	Within groups	216.641	395	.548		
	Total	228.178	399			
2. Doing	Between groups	10.600	4	2.650	4.871	.001*
	Within groups	214.885	395	.544		
	Total	225.484	399			
3. Checking	Between groups	11.356	4	2.839	4.991	.001*
	Within groups	224.663	395	.569		
	Total	236.019	399			
4. Acting	Between groups	6.972	4	1.743	2.862	.023*
	Within groups	240.566	395	.609		
	Total	247.538	399			

From table 4.13, analysis results with One-Way ANOVA: F- test. Sig. value is less than significance level by statistic is  $\alpha=0.05$ , which four aspects are Planning (.000\*), Doing (.001\*), Checking (.001\*), and Acting/development (.023\*). There is a level of the opinion of sample group at different ages, there are the opinion on compliance the quality cycle (PDCA), to different, to test by the pairs difference with LSD methods (Fisher's Least - significant different) is shown in the following table.

**Table 4.14** Testing difference to compare in the pairs with LSD method of opinion on compliance quality cycle (PDCA)

	not over	26 - 35	36 - 45	46 – 55	56 years up
Planning	25				
Not over 25 years	-	-	-	-	.882*
26 - 35 years	-	-	-	296*	545*
36 – 45 years	-	-	-	-	407*
46 – 55 years	-	-	-	-	-
56 years up	-	-	-	-	-

From table 4.14, the compare results showed that the sample group were not over 25 years, there are the opinion on compliance quality cycle (PDCA) was more than (.882\*). Age range of sample groups 26-35 years there are the opinion on compliance quality cycle less than (-.296\*) age range of sample groups 46-55 years, and less than (-.545\*) 56 years up, for the age range of sample groups at 46-55 years there are the opinion on compliance quality cycle less than (-.407\*) 56 years up.

**Table 4.15** Testing difference to compare in the pairs with LSD method of opinion on compliance quality cycle (PDCA)

	not over 25	26 - 35	36 - 45	46 – 55	56 years up
Doing					
Not over 25	-	-	-	-	-
years					
26 - 35 years	-	-	-	282*	522*
36 – 45 years	-	-	-	-	439*
46 – 55 years	-	-	-	-	-
56 years up	-	-	-	-	-

From table 4.15, the compare results showed that the sample group were 26-35 years, there are the opinion on compliance quality cycle less than (-.282\*) age range of sample groups 46-55 years, and less than (-.522\*) 56 years up, for the age range of sample groups at 36-45 years there are the opinion on compliance quality cycle less than (-.439\*) 56 years up.

**Table 4.16** Testing difference to compare in the pairs with LSD method of opinion on compliance quality cycle (PDCA)

Checking	not over 25	26 - 35	36 - 45	46 – 55	56 years up
Checking					
Not over 25 years	-	-	-	-	-
26 - 35 years	-	-	-	331*	435*
36 – 45 years	-	-	-	321*	425*
46 – 55 years	-	-	-	-	-
56 years up	-	_	-	-	-

From table 4.16, the compare results showed that the sample group were 26-35 years, there are the opinion on compliance quality cycle less than (-.331\*) age range of sample groups 46-55 years, and less than (-.435\*) 56 years up, for the age range of sample groups at 36-45 years there are the opinion on compliance quality cycle less than (-.321\*) age range of sample groups 46-55 years, and less than (-.425\*) 56 years up.

**Table 4.17** Testing difference to compare in the pairs with LSD method of opinion on compliance quality cycle (PDCA)

Acting	not over 25	26 - 35	36 - 45	46 – 55	56 years up
reing					
Not over 25 years	-	-	-	-	-
26 - 35 years	-	-	-	-	423*
36 – 45 years	-	-	-	-	413*
46 – 55 years	-	-	-	-	-
56 years up	-	-	_	_	-

From table 4.17, the compare results showed that the sample group were 26-35 years, there are the opinion on compliance quality cycle less than (-.423\*) 56 years up, for the age range of sample groups at 3 6-4 5 years, there are the opinion on compliance quality cycle less than (-.413\*) 56 years up.

**Table 4.18** Variance testing to compare the opinions of the sample groups on the quality cycle (PDCA), classified by educational background.

<b>Quality cycle</b>	Variance	SS	df	MS	F	Sig.
1. Planning	Between groups	1.783	3	.594	1.040	.375
	Within groups	226.395	396	.572		
	Total	228.178	399			
2. Doing	Between groups	2.056	3	.685	1.215	.304
	Within groups	223.428	396	.564		
	Total	225.484	399			
3. Checking	Between groups	.743	3	.248	.417	.741
	Within groups	235.276	396	.594		
	Total	236.019	399			
4. Acting	Between groups	.688	3	.229	.368	.776
	Within groups	246.850	396	.623		
	Total	247.538	399			

From table 4.18, analysis results with One-Way ANOVA: F- test. Sig. value is more than significance level by statistic is  $\alpha = 0.05$ , which four aspects are planning (.375\*),

Doing (.304\*), Checking (.741\*), and Acting/development (.776\*). There is a level of the opinion of sample group at different educational background, there are the opinion on compliance the quality cycle (PDCA) are not different.

**Table 4.19** Variance testing to compare the opinions of the sample groups on the quality cycle (PDCA), classified by position.

Quality cycle	Variance	SS	df	MS	F	Sig.
1. Planning	Between groups	.977	3	.326	.567	.637
	Within groups	227.201	396	.574		
	Total	228.178	399			
2. Doing	Between groups	1.747	3	.582	1.030	.379
	Within groups	223.738	396	.565		
	Total	225.484	399			
3. Checking	Between groups	3.179	3	1.060	1.802	.146
	Within groups	232.840	396	.588		
	Total	236.019	399			
4. Acting	Between groups	1.752	3	.229	.941	.421
	Within groups	245.785	396	.623		
	Total	247.538	399			

From table 4.19, analysis results with One-Way ANOVA: F- test. Sig. value is more than significance level by statistic is  $\alpha = 0.05$ , which four aspects are planning (.637\*),

Doing (.379\*), Checking (.146\*), and Acting/development (.421\*). There is a level of the opinion of sample group at different position, there are the opinion on compliance the quality cycle (PDCA) are not different.

**Table 4.20** Variance testing to compare the opinions of the sample groups on the quality cycle (PDCA), classified by status.

<b>Quality cycle</b>	Variance	SS	df	MS	F	Sig.
1. Planning	Between groups	3.081	4	.770	1.351	.250
	Within groups	225.097	395	.570		
	Total	228.178	399			
2. Doing	Between groups	2.278	4	.569	1.008	.403
	Within groups	223.207	395	.565		
	Total	225.484	399			
3. Checking	Between groups	1.322	4	.331	.556	.695
	Within groups	233.697	395	.594		
	Total	236.019	399			
4. Acting	Between groups	1.943	4	.486	.781	.538
	Within groups	245.594	395	.622		
	Total	247.538	399			

From table 4.20, analysis results with One-Way ANOVA: F - test. Sig. value is more than significance level by statistic is  $\alpha = 0.05$ , which four aspects are planning (.250\*),

Doing (.403\*), Checking (.695\*), and Acting/development (.538\*). There is a level of the opinion of sample group at different status, there are the opinion on compliance the quality cycle (PDCA) are not different.

**Table 4.21** Variance testing to compare the opinions of the sample groups on the Four Iddhipadas, classified by age.

4 Iddhipadas	Variance	SS	df	MS	F	Sig.
1. Chanda	Between groups	12.211	4	3.053	5.497	.000*
	Within groups	219.361	395	.555		
	Total	231.572	399			
2. Viriya	Between groups	9.473	4	2.368	3.849	.004*
	Within groups	243.064	395	.615		
	Total	252.538	399			
3. Citta	Between groups	11.936	4	2.984	5.325	.000*
	Within groups	221.344	395	.615		
	Total	233.280	399			
4. Vimamsa	Between groups	9.650	4	2.412	4.089	.003*
	Within groups	233.017	395	.590		
	Total	242.666	399			

From table 4.21, analysis results with One-Way ANOVA: F- test. Sig. value is less than significance level by statistic is  $\alpha = 0.05$ , which four aspects are Chanda (.000\*),

Viriya (.004\*), Citta (.000\*), and Vimamsa (.003\*). There is a level of the opinion of sample group at different ages, there are the opinion on compliance the Four Iddhipadas, to different, to test by the pairs difference with LSD methods (Fisher's Least - significant different) is shown in the following table.

**Table 4.22** Testing difference to compare in the pairs with LSD method of opinion on compliance Four Iddhipadas.

	not over	26 - 35	36 - 45	46 – 55	56 years up
Chanda	25				
Not over 25 years	-	-	-	-	-
26 - 35 years	-	-	-	297*	555*
36 – 45 years	-	-	-	215*	472*
46 – 55 years	-	-	-	-	-
56 years up	-	-	-	-	-

From table 4.22, the compare results showed that the sample group were 26-35 years, there are the opinion on compliance Four Iddhipadas less than (-.297\*) age range of sample groups 46-55 years, and less than (-.555\*) 56 years up, for the age range of sample groups at 3 6-4 5 years, there are the opinion on compliance Four Iddhipadas less than (-.215\*) age range of sample groups 46-55 years, and less than (-.472\*) 56 years up.

**Table 4.23** Testing difference to compare in the pairs with LSD method of opinion on compliance Four Iddhipadas.

Viriya	not over 25	26 - 35	36 - 45	46 – 55	56 years up
, miyu					
Not over 25 years	-	-	-	-	-
26 - 35 years	-	-	-	272*	459*
36 – 45 years	-	-	-	213*	399*
46 – 55 years	-	-	-	-	-
56 years up	-	-	-	-	-

From table 4.23, the compare results showed that the sample group were 26-35 years, there are the opinion on compliance Four Iddhipadas less than (-.272\*) age range of sample groups 46-55 years, and less than (-.459\*) 56 years up, for the age range of sample groups at 3 6-4 5 years, there are the opinion on compliance Four Iddhipadas less than (-.213\*) age range of sample groups 46-55 years, and less than (-.399\*) 56 years up.

**Table 4.24** Testing difference to compare in the pairs with LSD method of opinion on compliance Four Iddhipadas.

Citta	not over 25	26 - 35	36 - 45	46 – 55	56 years up
Not over 25 years	-	-	-	-	-
26 - 35 years	-	-	-	312*	536*
36 – 45 years	-	-	-	-	424*
46 – 55 years	-	-	-	-	-
56 years up	-	-	-	-	-

From table 4.24, the compare results showed that the sample group were 26-35 years, there are the opinion on compliance Four Iddhipadas less than (-.312\*) age range of sample groups 46-55 years, and less than (-.536\*) 56 years up, for the age range of sample groups at 3 6-4 5 years, there are the opinion on compliance Four Iddhipadas less than (-.424\*) 56 years up.

**Table 4.25** Testing difference to compare in the pairs with LSD method of opinion on compliance Four Iddhipadas.

Vimamsa	not over 25	26 - 35	36 - 45	46 – 55	56 years up
Not over 25 years	-	-	-	-	-
26 - 35 years	-	-	-	237*	536*
36 – 45 years	-	-	-	-	423*
46 – 55 years	-	-	-	-	299*
56 years up	-	-	-	-	-

From table 4.25, the compare results showed that the sample group were 26-35 years, there are the opinion on compliance Four Iddhipadas less than (-.237\*) age range of sample groups 46-55 years, and less than (-.536\*) 56 years up, the age range of sample groups at 36-45 years, there are the opinion on compliance Four Iddhipadas less than (-.423\*) 56 years up, for the age range of sample groups at 46-55 years, there are the opinion on compliance Four Iddhipadas less than (-.299\*) 56 years up.

**Table 4.26** Variance testing to compare the opinions of the sample groups on the Four Iddhipadas, classified by educational background.

4 Iddhipadas	Variance	SS	df	MS	F	Sig.
1. Chanda	Between groups	7.826	3	2.609	4.617	.003*
	Within groups	223.746	396	.565		
	Total	231.572	399			
2. Viriya	Between groups	5.541	3	1.847	2.961	.032*
	Within groups	246.997	396	.624		
	Total	252.538	399			
3. Citta	Between groups	3.702	3	1.234	2.129	.096
	Within groups	229.578	396	.580		
	Total	233.280	399			
4. Vimamsa	Between groups	5.985	3	1.995	3.338	.019*
	Within groups	236.681	396	.598		
	Total	242.666	399			

Note: \* ANOVA F-test is significant at the 0.05 level.

From table 4.26, analysis results with One-Way ANOVA: F - test. Sig. value is more than significance level by statistic is  $\alpha = 0.05$ , which 1 aspects is Citta (.096\*), there are the opinion on compliance the Citta is not different. For Sig. value is less than significance level by statistic is  $\alpha = 0.05$ , which three aspects are Chanda (.003\*), Viriya (.032\*), and Vimamsa (.019\*), there is a level of the opinion of sample group at different educational background, there are the opinion on compliance the Four Iddhipadas, to different, to test by the pairs difference with LSD methods (Fisher's least significant different), as follow:

**Table 4.27** Testing difference to compare in the pairs with LSD method of opinion on compliance Four Iddhipadas.

Chanda	Bachelor	Master	Doctorate	Other(diploma)
Chanda				
Bachelor	-	-	411*	-
Master	-	-	264*	-
Doctorate	-	-	-	-
Other(diploma)	-	-	-	-

From table 4.27, the compare results showed that the sample group were Bachelor degree, there are the opinion on compliance Four Iddhipadas-Chanda less than (-.411\*) Doctorate degree. For Master degree, there are the opinion on compliance Four Iddhipadas-Chanda less than (-.264\*) Doctorate degree.

**Table 4.28** Testing difference to compare in the pairs with LSD method of opinion on compliance Four Iddhipadas.

Viriya	Bachelor	Master	Doctorate	Other(diploma)
Bachelor	-	-	-	-
Master	-	-	229*	-
Doctorate	-	-	-	-
Other(diploma)	-	-	-	-

From table 4.2.8, the compare results showed that the sample group were Master degree, there are the opinion on compliance Four Iddhipadas-Viriya less than (-.229\*) Doctorate degree.

**Table 4.29** Testing difference to compare in the pairs with LSD method of opinion on compliance Four Iddhipadas.

Vimamsa	Bachelor	Master	Doctorate	Other(diploma)
Villanisa				
Bachelor	-	-	279*	-
Master	-	-	262*	-
Doctorate	-	-	-	-
Other(diploma)	-	-	-	-

From table 4.29, the compare results showed that the sample group were Bachelor degree, there are the opinion on compliance Four Iddhipadas-Vimamsa less than (-.279\*) Doctorate degree. For Master degree, there are the opinion on compliance Four Iddhipadas-Vimamsa less than (-.262\*) Doctorate degree.

**Table 4.30** Variance testing to compare the opinions of the sample groups on the Four Iddhipadas, classified by position.

4 Iddhipadas	Variance	SS	df	MS	F	Sig.
1. Chanda	Between groups	6.280	3	2.093	3.680	.012*
	Within groups	225.292	396	.569		
	Total	231.572	399			
2. Viriya	Between groups	2.273	3	.758	1.199	.310
	Within groups	250.265	396	.632		
	Total	252.538	399			
3. Citta	Between groups	2.069	3	.690	1.181	.317
	Within groups	231.211	396	.584		
	Total	233.280	399			
4. Vimamsa	Between groups	2.532	3	.844	1.392	.245
	Within groups	240.135	396	.606		
	Total	242.666	399			

Note: \* ANOVA F-test is significant at the 0.05 level.

From table 4.30, analysis results with One-Way ANOVA: F - test. Sig. value is more than significance level by statistic is  $\alpha=0.05$ , which three aspects are Viriya (.310\*), Citta (.317\*), and Vimamsa (.245\*), there are the opinion on compliance Four Iddhipadas are not different. For Sig. value is less than significance level by statistic is  $\alpha=0.05$ , which one aspects is Chanda (.012\*), there is the level of the opinion of sample group at different position, there is the opinion on compliance the Four Iddhipadas-Chanda, to different, to test by the pairs difference with LSD methods (Fisher's least significant different), as follow:

**Table 4.31** Testing difference to compare in the pairs with LSD method of opinion on compliance Four Iddhipadas.

	Personal-	Teacher/	Head or	Other
Chanda	IQA(SAR)	Instructors	Chairman	(relative)
Personal-	-	-	-	-
IQA(SAR)				
Teacher/Instructors	-	-	-	.272*
Head/Chairman of	-	-	-	.394*
Program				
Other (relative)	-	-	-	-

From table 4.31, the compare results showed that the sample group were Teacher/Instructors, there are the opinion on compliance Four Iddhipadas-Chanda more than (.272\*) Other(raletive). For Head/Chairman of Program, there are the opinion on compliance Four Iddhipadas-Chanda more than (.394\*) Other(raletive).

**Table 4.32** Variance testing to compare the opinions of the sample groups on the Four Iddhipadas, classified by marital status.

4 Iddhipadas	Variance	SS	df	MS	F	Sig.
1. Chanda	Between groups	2.592	4	.648	1.118	.348
	Within groups	228.980	395	.580		
	Total	231.572	399			
2. Viriya	Between groups	3.154	4	.788	1.249	.290
	Within groups	249.384	395	.631		
	Total	252.538	399			
3. Citta	Between groups	6.002	4	1.501	2.608	.035*
	Within groups	227.278	395	.575		
	Total	233.280	399			
4. Vimamsa	Between groups	1.541	4	.385	0.631	.641
	Within groups	241.125	395	.610		
	Total	242.666	399			

Note: \* ANOVA F-test is significant at the 0.05 level.

From table 4.32, analysis results with One-Way ANOVA: F - test. Sig. value is more than significance level by statistic is  $\alpha = 0.05$ , which three aspects are Chanda (.348\*), Viriya (.290\*), and Vimamsa (.641\*), there are the opinion on compliance Four Iddhipadas are not different. For Sig. value is less than significance level by statistic is  $\alpha = 0.05$ , which one aspects is Citta (.035\*), there is the level of the opinion of sample group at different position, there is the opinion on compliance the Four Iddhipadas-Citta, to different, to test by the pairs difference with LSD methods (Fisher's Least - significant different), as follow:

**Table 4.33** Testing difference to compare in the pairs with LSD method of opinion on compliance Four Iddhipadas.

Four Iddhipadas: Citta	Single	Monk or Bhikkhu	Married (living)	Married (separated)	Widowed/ Divorced
Single	-	-	-	-	-
Monk/Bhikkhu	-	-	-	-	.316*
Married (living)	-	-	-	-	432*
Married separated)	-	-	-	-	-
Widowed/divorced	-	-	-	-	-

From table 4 .3 3 , the compare results showed that the sample group were Monk/Bhikkhu, there are the opinion on compliance Four Iddhipadas-Citta more than (.316\*) Widowed/Divorced. For married (living together), there are the opinion on compliance Four Iddhipadas-Citta less than (.432\*) Widowed/Divorced.

# Part 5 Analysis of the relationship between the opinions of the sample groups on compliance quality cycle (PDCA) and the Four Iddhipadas.

By here is hypothesis for the test as follow:

**H**<sub>0</sub>: Compliance with quality cycle have not relationship with compliance Four Iddhipadas.

**H**<sub>1</sub>: Compliance with quality cycle have relationship with compliance Four Iddhipadas.

**Table 4.34** Analysis of the correlation between opinions on compliance quality cycle and compliance Four Iddhipadas.

Relationship between	Compliance quality cycle have relationship 4							
practice The quality		Iddhipadas						
cycle	Chanda	Viriya	Citta	Vimamsa				
1. Planning	.717**	.688**	.672**	.651**				
2. Doing	.742**	.700**	.719**	.728**				
3. Checking	.751**	.723**	.709**	.692**				
4. Acting	.740**	.699**	.697**	.718**				

Note: \*\* Multiple correlation test is significant at the 0.01 level.

From table 4.34, the results of the Multiple Correlation, test at the 0.01 significant level, showed that the opinion on compliance quality cycle have correlation with the compliance Four Iddhipadas, which 4 sides at positive correlation coefficient (.717, .688, .672, .651). For Doing at positive correlation coefficient (.742, .728, .719, .700). Checking at positive correlation was found with one side levels of high (.751) and level rather tall (.723, .709, .692). Acting sides at positive correlation coefficient (.740, .718, .699, .697) respectively. By conclusion the correlation between the opinions of the sample groups and the compliance quality cycle (PDCA) and on compliance Four Iddhipadas, have correlation in the positive in the level rather tall to high.

## **4.3 Recommendations**

Four Iddhipapas for Training Personnel of Institute. When the Personnel have Four Iddhipadas Mine, they have to do good works.

 Table 4.35 Shows Four Iddhipapas for Training Personnel of Institute

4 Iddhipadas				
Training	Chanda	Viriya	Citta	Vimamsa
Personnel of				
Institution				
Dean / Deputy	The role and	The Faculty	The spirit that	The monitor,
Dean	duties of	for diligence	is committed	evaluate and
	Faculty must	to increase	to doing	improve the
	be control,	the quality	everything to	quality and
	monitor and	and standard.	improve	standards of
	evaluate.		quality and	students.
			standards.	
Teacher /	The teaching	Diligent will	The mind is	Assessment
Instructor	plan is to	teach students	committed to	and
	provide stud-	and teach the	quality	improvement
	dents quality	standard	teaching and	to students'
	and standards.	quality	standards.	quality.
Students	The students	Coaching	Have students	The students
	love to learn	students to be	regularly	improve
	what they	diligent in	check their	themselves,
	teach.	learning and	learning	their grades
		performing	outcomes	
		effectively.		
Officers and Staff	The staff are	The staff is	The staff must	Developing
	satisfied with	always	always be	of personnel
	the service.	diligent in	passionate	to do.
	Teachers and	performing	quality,	Effective and
	students	duties.	practice	productive

## 4.3.1 Four Iddhipapas for Training Personnel of Institute

In order to ensure educational quality assurance is beneficial, procedural guidelines for internal quality assurance should be adopted in harmony with the quality cycle, which consists of four stages: planning, carrying out operations and collecting data. Doing, assessing quality. Checking, and making suggestions for improvements. Acting, the details are as follows:

Chanda/Planning; Start the quality assessment planning process at the beginning of the academic year, using the previous year's assessment results as data for planning, and begin collecting data from June onwards, if the former academic year calendar is used, or from August onwards, if the ASEAN academic year calendar is used.

Viriya/Doing; Carry out operations and collect data, recording performance results from the beginning of the academic year, from the 1st month to the 12th month (June to May of the following year, or August to July of the following year).

Citta/Checking; Assess quality at the program, faculty, and institutional levels between June and August of the following year, or between August and October of the following year.

Vimamsa/Acting; Program of studies, faculty, and institutional committees draw up improvement plans, and begin making improvements based on assessment results. Use recommendations made by the internal quality assessment committee and assessment results to make plans for operational improvements (including suggestions from the University Council), draw up an annual plan and set up an annual budget for the following year, or propose using a mid-year budget or a special budget.

## Internal quality assurance procedures are as follows:

- 1) The institution plans its internal educational quality assurance for the new academic year.
- 2) The institution collects 12 months of data in accordance with the indicators announced in the CHE QA Online system, and conducts internal quality assessment annually at the program, faculty, and institutional levels.
- 3) The program of studies prepares a program level Self-Assessment Report and is assessed through CHE QA Online system.

- 4) Based on the program assessment results, the faculty or equivalent level prepares a Self-Assessment Report at the faculty level.
- 5) The faculty or equivalent level is assessed through the CHE QA Online system, and verifies the results of program-level assessments.
- 6) Based on the program and faculty assessment results, the institution prepares a Self Assessment Report at the institutional level.
- 7) The institution is assessed through the CHE QA Online system, verified the program and faculty level assessment results. It presents the Self Assessment Report to the University Council so that institutional development plans may be made for the next academic year.
- 8) Institutional administrators use assessment results and recommendations from the internal quality assessment committee appointed by the institution (including suggestions from the University Council), to improve operations, the annual plan, and the strategic plan.
- 9) The institution sends an annual internal quality assessment report through the CHE QA Online system within 120 days of the end of the academic year.

In the case of the need to publicized quality curriculum of study that meets the standard curriculum of the Thai Qualifications Framework for Higher Education of 2009, the composition of the internal educational quality assessment committee at the curriculum level is defined as follows:

- 1) At least 3 qualified experts, more than half of whom are external to the institution, and at least one person must be qualified in the field of study being assessed
- 2) The committee chair must be a qualified expert who is external to the institution, as such, all committee members must be registered as program level internal quality assessors of the Office of the Higher Education Commission.

The specific qualifications for committee members of curriculum level, internal quality assessment teams at each educational level are as follows:

- 1) Bachelor Degree Programs: each committee member has a Master Degree or higher, or hold the academic rank of Assistant Professor or higher.
- 2) Master Degree Programs: each committee members has a Doctoral Degree, or hold the academic rank of Associate Professor or higher.

3) Doctoral Degree Programs: each committee members has a Doctoral Degree, or hold the academic rank of Professor.

# **4.3.2** Interview results of the administrators of higher education institutions (group 2, 10 persons)

Quality Management of the curriculum to quality and standards. The Executive Education Quality Assurance Commission, component: the president, Vice President, Assistant President, Dean of all faculties and the Director of Educational Quality Assurance.

- 1) Establish a policy / plan for the implementation of the university quality assurance program. To cover the mission and the National Education Act.
- 2) Supervise and monitor the implementation of university quality assurance. Go to quality development and raise standards to international standards.
- 3) To give instructions on the implementation of the university quality assurance. To meet the standards set.
  - 4) Provide ongoing operational advice for continuous improvement.
  - 5) Other directors as appropriate.

# The quality assurance program for TQR is included in the TQR registration process.

- 1) The course will conduct the preliminary assessment, the readiness of the curriculum that can be used to evaluate the quality of the curriculum for publication in a quality and standard curriculum based on the TQR (Thai Qualifications Register: TQR). The curriculum must have quality assessment results within the curriculum. To be better. Average score is 3.01 up.
- 2) The curriculum is designed to record the quality of education within the curriculum. To disseminate quality and standard curricula according to the National Higher Education Framework (TQR), as detailed below.
- 2.1) The results of the evaluation of the quality of education within the curriculum level of the academic year 2016 improved and the average score was 3.01 and above.
- 2.2) List of Quality Assessment Committees within the curriculum. From the list of quality assurance registrants within the curriculum of the Office of the

Higher Education Commission or the Chancellery for the preparation of the TQR curriculum, At least 3 people who are qualified or related to the branch of application for evaluation. And at least one of the external qualifiers must have a qualification in the relevant field of study. The Chairman of the Board must be an external expert.

- 3) The course of delivery of records for TQR registration, with the approval of the Dean. To the Quality Assurance Department of the Institute.
- 4) Quality Assurance Department of the Institute. To conduct a detailed examination of the quality of education within the curriculum. And report back to the board. To inform the course.
- 5) The Faculty conducts the selection of the internal quality assurance committee (from the list of TQR appraisers) in case the curriculum is qualified by the quality assurance department.
- 6) Quality Assurance Department Proposing a list of committee members (may be an assessment of the academic year) to assess the TQR registration level.
- 7) Internal Audit Committee Evaluate and report the course and confirm the results via the CHE QA Online system of the curriculum committee.
- 8) Curriculum Vitae to report the result of the TQR registration examination for the curriculum that is subject to quality assurance within the curriculum. Average grade point average of 3.01 and above, with a copy of the evaluation report of the quality of education within the curriculum level and attached to the order of the Internal Quality Assessment Board. Including the quality of the learner and the learning outcomes of the programs (Program Learning Outcomes) to reflect the society that the graduates of the course. What is the knowledge? What can I do? (According to objective 2) to propose to the Faculty. Approve TQR registration to Quality Assurance Department.
- 9) Quality Assurance Department Carry out an audit, evaluation and report preparation for the University Executive Board. And the University Council approves. To apply for a TQR registration
- 10) Quality Assurance Department Request for TQR registration to the Office of the Higher Education Commission The University Council and the Order to appoint the Internal Quality Assessment Board. Including the quality of the learner and the learning outcomes of the program (Program Learning Outcomes) that reflects

the society that the graduates of the course. What is knowledge and what can be done. (About half a page)

- 1) Establish a policy / plan for the implementation of the university quality assurance program. To cover the mission and the National Education Act.
- 2) Supervise and monitor the implementation of university quality assurance. Go to quality development and raise standards to international standards.
- 3) To give instructions on the implementation of the university quality assurance. To meet the standards set.
  - 4) Provide ongoing operational advice for continuous improvement.
  - 5) Other directors as appropriate.

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- 2) The curriculum is designed to record the quality of education within the curriculum. To disseminate quality and standard curricula according to the National Higher Education Framework (TQR), as detailed below.
- 2.1) The results of the evaluation of the quality of education within the curriculum level of the academic year 2016 improved and the average score was 3.01 and above.
- 2.2) List of Quality Assessment Committees within the curriculum. From the list of quality assurance registrants within the curriculum of the Office of the Higher Education Commission or the Chancellery for the preparation of the TQR curriculum, At least 3 people who are qualified or related to the branch of application for evaluation. And at least one of the external qualifiers must have a qualification in the relevant field of study. The Chairman of the Board must be an external expert.
- 3) The course of delivery of records for TQR registration, with the approval of the Dean. To the Quality Assurance Department of the Institute.

- 4) Quality Assurance Department of the Institute. To conduct a detailed examination of the quality of education within the curriculum. And report back to the board. To inform the course.
- 5) The Faculty conducts the selection of the internal quality assurance committee (from the list of TQR appraisers) in case the curriculum is qualified by the quality assurance department.
- 6) Quality Assurance Department Proposing a list of committee members (may be an assessment of the academic year) to assess the TQR registration level.
- 7) Internal Audit Committee Evaluate and report the course and confirm the results via the CHE QA Online system of the curriculum committee.
- 8) Curriculum Vitae to report the result of the TQR registration examination for the curriculum that is subject to quality assurance within the curriculum. Average grade point average of 3.01 and above, with a copy of the evaluation report of the quality of education within the curriculum level and attached to the order of the Internal Quality Assessment Board. Including the quality of the learner and the learning outcomes of the programs (Program Learning Outcomes) to reflect the society that the graduates of the course. What is the knowledge? What can I do? (According to objective 2) to propose to the Faculty. Approve TQR registration to Quality Assurance Department.
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- 10) Quality Assurance Department Request for TQR registration to the Office of the Higher Education Commission The University Council and the Order to appoint the Internal Quality Assessment Board. Including the quality of the learner and the learning outcomes of the program (Program Learning Outcomes) that reflects the society that the graduates of the course. What is knowledge and what can be done. (About half a page)

### **4.3.3 Interviews results from administrators** (group 3, 20 persons)

For interviews, those who complied with the quality assurance for curriculum level (Dean, vice Dean, Assistant Dean, Curriculum Director, and the Director of Educational Quality Assurance). Supervision, monitoring and evaluation of teaching and learning management in curriculum / program. The quality and standards of the school. The Board of Directors has appointed the Quality Assurance Executive Committee. componence with Each Dean is the chairman, Vice Dean for Quality Assurance and the quality assurance supervisor in each faculty, as follows.

- 1) Establish a system and mechanisms for quality assurance in primary education. And the school. To be covered by quality elements in accordance with the standard. And according to university policy.
- 2) To supervise the quality assurance of the curriculum and the school curriculum in accordance with the educational quality assurance system and mechanism.
- 3) Monitor and evaluate the performance of the indicator. And the criteria for achieving both objectives are the curriculum level and the faculty.
- 4) Supervise the preparation of quality development plans at both the curriculum level and the faculty level.
- 5) Prepare manuals for quality assurance of internal education of each faculty.
- 6) Make a self-assessment report (SAR) at the curriculum level. And the faculty.

## Compliance with quality cycle (Deming's Cycle)

- 1) Planning The beginning of the planning process at the beginning of the academic year. The results of the previous year. Use as planning information. Data is collected from June. In case of using the traditional open-close. Or from August. The use of open-ended education systems in ASEAN.
- 2 ) Doing the operation, keeping records of the performance since the beginning of the academic year is the first month 12 months of the academic year.
- 3 ) Checking: Perform quality assessment at the curriculum / department level (June August). Or between August and October. Of the next academic year)
- 4) Acting, planning, updating, and implementing improvements based on evaluation results. Course Advisory Board The recommendations and evaluations of the internal quality assurance committee were proposed to improve the implementation. Including the recommendation of the University Council. Prepare annual action plan and propose budget next year.

Management of curriculum quality and standards according to Four Iddhipadas, by the teacher and responsible Curriculum / program responsible and attentive to comply with curriculum standards. There are a good mind to serve the students, summarized as follows

- 1) Chanda is passionate and satisfied with the desire to do what is good for students. The satisfaction of love or the like in the preliminary. It stimulates thinking and planning. As well as systematic design. Curriculum Planning in Higher Education Institutions to ensure that the education of the higher education institutions is as good as the curriculum. The principle is to encourage people to invent and plan for good quality.
- Satisfaction of the instructors on the quality assurance within the curriculum. The school plans and systems for quality assurance. Deputy Dean for Quality Assurance Supervise each subject. And within the Faculty has appointed a quality team with the Faculty. There are representatives from all disciplines. Coordinated with and supervised the quality assurance of the school. Therefore, the faculty can drive quality assurance as well.
- The faculty is responsible for training the instructors in the curriculum to understand the elements and indicators of quality assurance in curriculum standards and quality in teaching and learning in the curriculum. Track and evaluate to prepare for assessment in every academic year. The emphasis is on the teacher to develop skills and knowledge for students to achieve the quality and standards.
- 2) Viriya, diligently tries hard to do things with endless effort and patience. Try to make quality assurance meet the target. The curriculum is taught in accordance with the objectives of the curriculum set forth in TQF 2, and to develop textbooks and research for quality and to enhance the students' learning experience.
- Most faculty to work in teaching students to gain knowledge and experience. The teaching is very important. Students are responsible for their responsibility. The instructors will have instructional materials that meet the requirements of TQF 3, and the evaluation according to TQF 5, every subject by meeting in each field to drive the quality assurance in the field they are responsible.

- The use of the principle is persistence. Do you want to know? I know that there are plans to do what. The plan is clearly visible. Encourage the diligent work. Viriya will try to achieve it.
- 3) Citta has strong determination to do things and to dedicate himself to the devotion to the things he loves. What are you doing? Let's dedicate ourselves to the dedication of the mind-set.
- Based on the principle It's a continuation of the persistence. When working diligently. Control the work around to avoid mistakes, or minimal error The results of this study are as follows. Walk to plan as intended. Quality control always. Achievement is the standard of graduate school. Focus on producing quality graduates.
- The faculty as the quality assurance supervisor for the curriculum. The instructor has a strong focus on both teaching and quality assurance. The faculty has organized quality assurance trainers who are responsible for the courses that focus on the teacher's service. It is sincere that the graduates have the knowledge and moral. The curriculum staff have the knowledge and understanding to collect information and follow the curriculum quality assurance. The faculty has a policy to ensure the quality of the course as a clear indicator. And there are meetings to direct. Follow every month And evaluation of teaching and learning continuously every semester. Lecturer and course coordinator Responsible and attentive to comply with curriculum standards. Have a mind to serve the students well.
- 4) Vimamsa, teachers reflect on the monitoring and planning, measurement and improvement of the problem of reliance, vimamsa, the understanding of the work plan. Take control of the quality well. Which was analyzed. Check the results for the purpose of the course defined in the TQF 2.
- As instructors, they will have to improve the teaching and learning to be consistent and consistent. The curriculum quality assurance guideline for successful graduates to go to the labor market with quality and meet the needs of agencies and entrepreneurs.
- The faculty to determine follow university's policy is to closely monitor and evaluate the teaching and learning of the university. Focus on each teacher to teach on time, and teach the content of the course description. And time to teach the

course in each semester. All teaching materials or teaching materials are their own. To use in teaching throughout the course. Quality of teaching by students There are meetings for debating and finding ways to prevent mistakes. Have a meeting with experts to review the course in each semester.

By summary, the main function of Four Iddhipadas, are Chanda, Viriya, Chitta Vimamsa are the same as the fellowship. The dharma practice is a continuous cycle of quality love work, so diligent work diligently work. Last need around Therefore, the faculty will provide the four baht fellowships for the management of the curriculum, Success in the end.

The analysis of opinions on the quality cycle (PDCA) Including the high level was high ( $\overline{X} = 3.62$ ), Planning highest average ( $\overline{X} = 3.64$ ), Checking was high ( $\overline{X} = 3.62$ ), Acting was average ( $\overline{X} = 3.61$ ) and Doing was the lowest ( $\overline{X} = 3.59$ ).

The opinions on the Four Iddhipadas, were the high level ( $\overline{X} = 3.61$ ), Viriya, had the highest level ( $\overline{X} = 3.71$ ), Citta was the high level ( $\overline{X} = 3.70$ ). Vimamsa had the high level ( $\overline{X} = 3.66$ ) and the Chanda high level ( $\overline{X} = 3.65$ ).

For the relationship between the opinion on the Quality Cycle (PDCA) and the Four Iddhipadas. The planning and Four Iddhipadas have positive correlation coefficient were correlatively high level (.717, .688, .672, .651), was found in 4 aspects. The doing and Four Iddhipadas have positive correlation coefficient were high level (.742, .728, .719, .700). The checking and Four Iddhipadas have positive correlation were correlatively high levels (.751, .723, .709, .692). The acting and Four Iddhipadas have Positive correlation coefficient were correlatively high level (.740, .718, .699, .697). By conclusion, the relationship between the opinions of the sample and the performance of the quality cycle (PDCA) and the Four Iddhipadas are positive correlation were correlatively high level to high levels.

## 4.3.5 Recommendations for Improving from Interview and Questionnaires

- 1) Compliance with ISCED 2011, and ISCED 2013, which is defined as instructors in field or related field of study. In consideration is not clear.
  - 2) Assignment of lecturer / curriculum not clear. Lecturer responsible for

undergraduate courses applicants will be able to use either 5 full-time, as instructors in field 3 persons, and related field 2 persons (2 in 5) or other.

- 3) For graduate students applicants must be at least three full-time or three-year associate professors. 3 people) and use one of the graduates in a related discipline. Interpretive / non-relational fields some staff interpreted not according to ISCED 2011, ISCED 2013, which made the lecturer responsible for the curriculum / program, uncertainty.
- 4) In accordance with the curriculum guidelines, 2014 is not covered / not clear, the auditors interpreted differently, such as experienced instructors.
- 5) Office of the Higher Enducation Commission (OHEC) should improve the indicator 1.4 of FTES at the Faculty level. It is not related to the level of the curriculum that is assigned to the student body, such as the doctor-nurse 4:1-6:1. By the definition of a professional.
- 6) Preparation of "teaching Documents / Doctrine Documents" for admission to the academic position (Assist. / Assoc.), But not assigning points. Research articles / academic articles. This will be used for teaching in very few subjects. I do not use it.
- 7) The problem of compliance with the quality cycle system (PDCA), which both teachers and followers, and auditors of the curriculum / program, teamwork comments do not match.
- 8) The problem of Curriculum / program more than 1 teaching in the institute. Report in the throat in the same set but they can't be classified as quality indicators 2.1, 2.2, 3.1, 3.2, 4.1, 4.2, 5.2, 5.3 and 6.1.
- 9) If the curriculum / Program is teaching many open, should be evaluated separately. This is because the potential of the teacher responsible for the curriculum/program area. Are different and the area or town is different.
- 10) The course verification in each semester, each higher education institution, there are different exams, some program do not have the course verified.

## **Chapter V**

## **Conclusion Discussion and Suggestion**

The main contribution of this dissertation to Curriculum Quality Management whit Quality Cycle and Four Iddhipadas in Higher Educational Institutions. This work has three main aspects; Conclusion Discussion and Suggestion as follows:

## 5.1 Conclusion

The interviews with the regulators (Higher Education Commission: HEC), and Office of the Higher Education Commission: OHEC), to ensure educational quality assurance is beneficial, procedural guidelines for internal quality assurance should be adopted in harmony with the quality cycle, which consists of four stages: planning, carrying out operations and collecting data. Doing, assessing quality. Checking, and making suggestions for improvements and Acting, improvements based on assessment results.

In the case of the need to publicized quality curriculum of study that meets the standard curriculum of the Thai Qualifications Framework for Higher Education of 2009, the composition of the internal educational quality assessment committee at the curriculum level is defined as follows:

- 1) At least 3 qualified experts, more than half of whom are external to the institution, and at least one person must be qualified in the field of study being assessed.
- 2) The committee chair must be a qualified expert who is external to the institution, as such, all committee members must be registered as program level internal quality assessors of the Office of the Higher Education Commission. The specific qualifications for committee members of curriculum level, internal quality assessment teams at each educational level are as follows:
- (1) Bachelor Degree Programs; each committee member has a Master Degree or higher, or hold the academic rank of Assistant Professor or higher.

- (2) Master Degree Programs; each committee members has a Doctoral Degree, or hold the academic rank of Associate Professor or higher.
- (3) Doctoral Degree Programs; each committee members has a Doctoral Degree, or hold the academic rank of Professor.

Quality Management of the curriculum to quality and standards. The Executive Education Quality Assurance Commission, component: the president, Vice President, Assistant President, Dean of all faculties and the Director of Educational Quality Assurance:

- 1) Establish a policy / plan for the implementation of the university quality assurance program. To cover the mission and the National Education Act.
- 2) Supervise and monitor the implementation of university quality assurance. Go to quality development and raise standards to international standards.
- 3) To give instructions on the implementation of the university quality assurance, to meet the standards set.
  - 4) Provide ongoing operational advice for continuous improvement.
  - 5) Other directors as appropriate.

The quality assurance program for TQR is included in the TQR registration process.

- 1) The course will conduct the preliminary assessment, the readiness of the curriculum that can be used to evaluate the quality of the curriculum for publication in a quality and standard curriculum based on the TQR (Thai Qualifications Register: TQR). The curriculum must have quality assessment results within the curriculum, to be better, average score is 3.01 up.
- 2) The curriculum is designed to record the quality of education within the curriculum. To disseminate quality and standard curricula according to the National Higher Education Framework (TQR), as detailed below.
- (1) To results of the evaluation of the quality of education within the curriculum level of the academic year 2016 improved and the average score was 3.01 and above.
- (2) List of Quality Assessment Committees within the curriculum. From the list of quality assurance registrants within the curriculum of the Office of the Higher Education Commission or the Chancellery for the preparation of the TQR

curriculum, at least 3 persons who are qualified or related to the branch of application for evaluation, and at least one of the external qualifiers must have a qualification in the relevant field of study, the Chairman of the Board must be an external expert.

- (3) The course of delivery of records for TQR registration, with the approval of the Dean, to the Quality Assurance Department of the Institute.
- (4) Quality Assurance Department of the Institute, to conduct a detailed examination of the quality of education within the curriculum. And report back to the board, to inform the course.
- (5) The Faculty conducts the selection of the internal quality assurance committee (from the list of TQR appraisers) in case the curriculum is qualified by the quality assurance department.
- (6) The Quality Assurance Department Proposing a list of committee members (may be an assessment of the academic year) to assess the TQR registration level.
- (7) Internal Audit Committee Evaluate and report the course and confirm the results via the CHE QA Online system of the curriculum committee.
- (8) Curriculum Vitae to report the result of the TQR registration examination for the curriculum that is subject to quality assurance within the curriculum. Average grade point average of 3.01 and above, with a copy of the evaluation report of the quality of education within the curriculum level and attached to the order of the Internal Quality Assessment Board. Including the quality of the learner and the learning outcomes of the programs (Program Learning Outcomes) to reflect the society that the graduates of the course. What is the knowledge? What can I do? (according to objective) to propose to the Faculty, approve TQR registration to Quality Assurance Department.
- (9) Quality Assurance Department Carry out an audit, evaluation and report preparation for the University Executive Board and the University Council approves, to apply for a TQR registration.
- (10) Quality Assurance Department Request for TQR registration to the Office of the Higher Education Commission The University Council and the order to appoint the Internal Quality Assessment Board. Including the quality of the learner and the

learning outcomes of the program (Main Learning Outcomes) that reflects the society that the graduates of the course. What is knowledge and what can be done?

## Compliance with quality cycle (Deming's Cycle)

- 1) Planning is beginning of the planning process at the beginning of the academic year. The results of the previous year. Use as planning information. Data is collected from June. In case of using the traditional open-close. Or from August. The use of open-ended education systems in ASEAN.
- 2 ) Doing; the operation, keeping records of the performance since the beginning of the academic year is the first month 12 months of the academic year.
- 3) Checking; Perform quality assessment at the curriculum / department level (June August). Or between August and October. Of the next academic year)
- 4 ) Acting; planning, updating, and implementing improvements based on evaluation results. Course advisory board the recommendations and evaluations of the internal quality assurance committee were proposed to improve the implementation. Including the recommendation of the University Council. Prepare annual action plan and propose budget next year.

Management of curriculum quality and standards according to Four Iddhipadas, by the teacher and responsible curriculum / programs responsible and attentive to comply with curriculum standards. There are a good mind to serve the students, summarized as follows:

1) Chanda is passionate and satisfied with the desire to do what is good for students. The satisfaction of love or the like in the preliminary. It stimulates thinking and planning, as well as systematic design. Curriculum Planning in Higher Education Institutions to ensure that the education of the higher education institutions is as good as the curriculum. The principle is to encourage people to invent and plan for good quality, satisfaction of the instructors on the quality assurance within the curriculum. The faculty plans and systems for quality assurance. Deputy Dean for Quality Assurance Supervise each subject, and within the faculty has appointed a quality team with the faculty. There are representatives from all disciplines, coordinated with and supervised the quality assurance of the faculty. Therefore, the faculty can drive quality assurance as well. The faculty is responsible for training the instructors in the

curriculum to understand the elements and indicators of quality assurance in curriculum standards and quality in teaching and learning in the curriculum. Track and evaluate to prepare for assessment in every academic year. The emphasis is on the teacher to develop skills and knowledge for students to achieve the quality and standards.

- 2) Viriya; diligently tries hard to do things with endless effort and patience, try to make quality assurance meet the target. The curriculum is taught in accordance with the objectives of the curriculum set forth in TQF 2, and to develop textbooks and research for quality and to enhance the students' learning experience, most faculty to work in teaching students to gain knowledge and experience. The teaching is very important. Students are responsible for their responsibility. The instructors will have instructional materials that meet the requirements of TQF 3, and the evaluation according to TQF 5, every subject by meeting in each field to drive the quality assurance in the field they are responsible, the use of the principle is persistence. Do you want to know? I know that there are plans to do what. The plan is clearly visible. Encourage the diligent work. Viriya will try to achieve it.
- 3) Citta; has strong determination to do things and to dedicate himself to the devotion to the things he loves. What are you doing? Let's dedicate ourselves to the dedication of the mind-set, based on the principle It's a continuation of the persistence. When working diligently. Control the work around to avoid mistakes, or minimal error the results of this study are as follows. Walk to plan as intended. Quality control always. Achievement is the standard of graduate school. Focus on producing quality graduates, faculty as the quality assurance supervisor for the curriculum. The instructor has a strong focus on both teaching and quality assurance. The faculty has organized quality assurance trainers who are responsible for the courses that focus on the teacher's service. It is sincere that the graduates have the knowledge and moral. The curriculum staff have the knowledge and understanding to collect information and follow the curriculum quality assurance. The faculty has a policy to ensure the quality of the course as a clear indicator, and there are meetings to direct. Follow every month and evaluation of teaching and learning continuously every semester, lecturer and course coordinator responsible and attentive to comply with curriculum standards, have a mind to serve the students well.

4) Vimamsa; teachers reflect on the monitoring and planning, measurement and improvement of the problem of reliance, vimamsa, the understanding of the work plan, take control of the quality well. Which was analyzed, check the results for the purpose of the course defined in the TQF 2, as instructors, they will have to improve the teaching and learning to be consistent and consistent. The curriculum quality assurance guideline for successful graduates to go to the labor market with quality and meet the needs of agencies and entrepreneurs. The faculty to determine follow University's policy is to closely monitor and evaluate the teaching and learning of the university, focus on each teacher to teach on time, and teach the content of the course description, and time to teach the course in each semester. All teaching materials or teaching materials are their own. To use in teaching throughout the course. Quality of teaching by students, there are meetings for debating and finding ways to prevent mistakes. Have a meeting with experts to review the course in each semester, so that, the main function of Four Iddhipadas, are Chanda, Viriya, Chitta and Vimamsa are the same as the fellowship. The Buddha-dharma practice is a continuous cycle of quality love work, so diligent work diligently work, the faculty will provide the Four Iddhipadas fellowships for the management of the curriculum, success in the end.

The analysis of opinions on the quality cycle (PDCA) Including the high level was high ( $\overline{X}$ =3.62), Planning highest average ( $\overline{X}$ =3.64), Checking was high ( $\overline{X}$ =3.62), Acting was average ( $\overline{X}$ =3.61), and Doing was the lowest ( $\overline{X}$ =3.59).

The opinions on the Four Iddhipadas, were the high level ( $\overline{X}$ =3.61), Viriya, had the highest level ( $\overline{X}$ =3.71), Citta was the high level ( $\overline{X}$ =3.70), Vimamsa had the high lelvel ( $\overline{X}$ =3.66), and the Chanda high level ( $\overline{X}$ =3.65).

For the relationship between the opinion on the Quality Cycle (PDCA) and the Four Iddhipadas. The planning and Four Iddhipadas have positive correlation coefficient were correlatively high level (.717, .688, .672, .651), was found in 4 aspects. The doing and Four Iddhipadas have positive correlation coefficient were high level (.742, .728, .719, .700). The checking and Four Iddhipadas have positive correlation were correlatively high levels (.751, .723, .709, .692). The acting and Four Iddhipadas have Positive correlation coefficient were correlatively high level (.740, .718, .699, .697). By conclusion, the relationship between the opinions of the

sample and the performance of the quality cycle (PDCA) and the Four Iddhipadas are positive correlation were correlatively high level to high levels.

## 5.2 Discussion

The synthesis of the results of the interviews of Higher Education commission and the administrators of the Office of the Higher Education Commission, including the trainers, It is based on the criteria of internal quality assurance assessment. Although there will be some modifications and indicators, such as indicator 1.1, item 12 in the curriculum level. "Cut off" and indicator 1.4 at the faculty level. It has been modified. "Percentage less than or equal to 0 is 5 score". For other indicators in the curriculum level, the problematic indicator has been described in practice to be clearer, and adjusted in accordance with the Ministry of Education. Standardized curriculum control in curriculum management is in line with the curriculum standards adopted in 2005, 2015 and the standard framework for higher education in 2009 throughout the duration of teaching and learning in the curriculum. Each institute of higher education issued regulations and appointed a committee to regulate. Supervise and follow up every semester and evaluate every academic year. This is in line with the results of research by Pattanaphong Chankuang<sup>1</sup>. Strategies for Developing Educational Quality Assurance of the Rajabhat Universities in Bangkok. It was found that the implementation of the university's strategy was in line with the quality assurance system of education and the development of human resources to support the educational quality assurance system.

## Compliance with quality cycle (Deming's Cycle)

1) Planning is beginning of the planning process at the beginning of the academic year. The results of the previous year. Somsith Songprasom<sup>2</sup>. Use as planning

<sup>&</sup>lt;sup>1</sup> Pattanaphong Chankuang "Strategies for Developing Educational Quality Assurance of the Rajabhat Universities in Bangkok. Dissertation, Doctor of Philosophy (Development Strategy) Phranakhon Rajabhat University, 2015.

<sup>&</sup>lt;sup>2</sup> Somsith Songprasom, Employees' Attitude Toward Chulalongkorn University Quality Assurance, 2007.

information. Data is collected from June. In case of using the traditional open-close. Or from August. The use of open-ended education systems in ASEAN.

- 2 ) Doing; the operation, keeping records of the performance since the beginning of the academic year is the first month, which corresponds to Panida Vashararangsi<sup>3</sup> the Perception and Participation Quality Assurance In Education of Private Higher Education Institutions, 12 months of the academic year.
- 3) Checking; Perform quality assessment at the curriculum / department level (June August), which corresponds with Panop Jangploy<sup>4</sup>. (2013). A Study of the Condition of Internal Education Quality Assurance or between August and October, of the next academic year.
- 4 ) Acting; planning, updating, and implementing improvements based on evaluation results. Course advisory board the recommendations and evaluations of the internal quality assurance committee were proposed to improve the implementation. Including the recommendation of the University Council, which corresponds to Pensri Chungtanajaroenlert and Pachaya Tangsira Knowledge, Understanding, Participation in Quality Assurance Operation, Prepare annual action plan and propose budget next year.

Most course instructors have followed the PDCA process, to ensure that educational quality assurance is beneficial, procedural guidelines for internal quality assurance should be adopted in harmony with the quality cycle, which consists of 4 steps: planning (Plan), carrying out operations and collecting data (Do), assessing quality (Check/Study), and making suggestions for improvements (Act). So that, P = Start the quality assessment planning process at the beginning of the academic year, using the previous year's assessment results as data for planning, and begin collecting data from June onwards, if the former academic year calendar is used, or from August onwards, if the ASEAN academic year calendar is used.  $\mathbf{D} = \text{Carry}$  out operations and collect data, recording performance results from the beginning of the academic year, from the 1st month to the 12<sup>th</sup> month (June to May of the following year, or August to

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<sup>&</sup>lt;sup>3</sup> Panida Vashararangsi, the Perception and Participation Quality Assurance in Education of Private Institutions, 2013.

<sup>&</sup>lt;sup>4</sup> Panop Jangploy, A Study of the Condition of Internal Education Quality Assurance of Schools under, 2013.

July of the following year). **C/S** = Assess quality at the program, faculty, and institutional levels between June and August of the following year, or between August and October of the following year. **A** = Program of studies<sup>5</sup>, faculty, and institutional committees draw up improvement plans, and begin making improvements based on assessment results. Use recommendations made by the internal quality assessment committee and assessment results to make plans for operational improvements (including suggestions from the University Council), draw up an annual plan and set up an annual budget for the following year, or prepare a development project and propose using a mid-year budget or a special budget.

To comply with the conditions for quality and standards to publish in TQR system. (Thai Qualifications Register: TQR) system, as can be seen from the current curriculum / program that "quality curriculum and standards in accordance with national qualifications standards" There are 87 courses from 9,099 curriculum about 0.96%. Most of the curriculum are under the supervision of professional supervisors, Engineering, Phrakru uthaisutkic<sup>6</sup>, Managerial Success with Four Iddhipada of Buddhist Monks for Buddhism Propagation in the Region of Uthaithani Province.

Research findings were as follows: 1) A whole of success and the belief aspect in Buddhism with the I4BM for BP, they were at the high level which curriculums are affiliated with famous universities such as Chulalongkorn University, Chiang Mai University, Khonkaen University, Walailak University, and Naresuan University, for curriculum / program of Private Universities, Rajabhat University and Rajamangala University of Technology. The TQR system is very small. Most of the higher education institutions such as M.D. Bachelor of Pharmacy, Bachelor of in Accountancy and Bachelor of focus / emphasis on providing courses / disciplines that earn a living to support the institution. The higher education institution has ordered the committee to supervise, monitor and evaluate in order to meet the quality cycle or

<sup>&</sup>lt;sup>5</sup> Pensri Chungtanajaroenlert and Pachaya Tangsira, Knowledge, Understanding, and Participation in Quality Assurance Operation among Personnel at Boromarajonani College of Nursing, Saraburi. 2011.

<sup>&</sup>lt;sup>6</sup> Phrakru Uthaisutkic, Managerial Success with Four Iddhipada of Buddhist Monks for Buddhism Propagation, 2014.

PDCA strictly. This is consistent with the results of Patchara Piluk<sup>7</sup>, State and problems of internal quality assurance implementation in higher education: Nonthaburi province. It was found that the opinions of personnel regarding the operation problems of internal quality assurance in higher education institutions were not significantly different.

In summary, the Four Iddhipadas are Chanda, Viriya, Citta, and Vimamsa, so it is a fellowship of Dharma, which is a common practice that is continuous cycle of quality love work, so diligent work diligently work. Last need around always check the work, so that faculty if gives Four Iddhipadas to make a curriculum quality, It will be successful in the end. This is consistent with the results of Nipon Opasee<sup>8</sup>, "Administration according to the Four Iddhipada of Huaithuanuea Sub-district Administrative Organization, in nongbua district, Nakhonsawan Province". it was found that the people's opinion toward the administrative Organization in Nongbua District, Nakhonsawan Province was at the high level in all the aspects.

To comparison of opinions on the quality cycle and opinions on the Four Iddhipadas. There was no statistically significant difference in the quality management of the curriculum between males and females at 0.05. The comparison between age education and position were statistically significant at 0.05, This is consistent with the results of Naiyana Phromsuay<sup>9</sup>, in the research subject. The use of Four Iddhipadas in the human resource management of the local government organizations. It was found that human resource development should proceed creativity and benefits in work with the principles of Chanda (aspiration), Viriya (perseverance), Citta (dedication), and Vimansa (investigation) at any time in order to accomplish personnel's working performance.

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<sup>&</sup>lt;sup>7</sup> Ratchara Piluk, State and problems of internal quality assurance implementation in higher education, 2014.

<sup>&</sup>lt;sup>8</sup> Nipon Opasee, Adminstration according to the four Iddhipada of Huaithuanuea Subdistrict organization, 2014.

<sup>&</sup>lt;sup>9</sup> Naiyana Phromsuay, an application of 4 paths of accomplishment to Human resource development of local, 2013.

An analysis of the relationship between opinions toward the implementation of the curriculum quality management and the opinions on the performance according to the Four Iddhipadas, at the statistical significance level of 0.01, the correlation was high (.651 - .751), indicating that the quality of the curriculum and the practice of the Four Iddhipadas were highly correlated. The course is of high quality. This is in line of Oranun Harnyoot's<sup>10</sup> research. The Participation in Educational Quality Assurance of Eastern Asia University Personnel. It was found that, the surrounding of a work factors were supporting from administrators, cooperation of colleagues, organizational climate, organizational culture, communication and quality assurance training, had related to participation in educational quality assurance of personnel.

## 5.3 Suggestion

## **5.3.1 Policy Recommendations**

Management of higher education institutions, the quality of PDCA should be taken into consideration, such as planning, developing or improving curriculum / programs to keep pace with technological advances. In the past year, the quality of the curriculum has been revised and improved. The Board of Assessment of the Course and take the evaluation results and Faculty Board recommendations, and use them to continuously improve the quality of the curriculum. Include the recommendation of the University Council, to make an annual action plan and propose a budget the following year.

For the practices according to the principle of Four Iddhipadas. Give full-time program Instructors and instructors responsible for the curriculum / program of studies. (Chanda) to teach and provide academic services, Perseverance (Viriya), diligent to teach and develop academic work (writing document / textbook and research) to teach students to get up to date knowledge. The willingness to teach and the mind (Citta) to serve students always, and are tracked Evaluate (Vimamsa) and cook better / better to build confidence in student quality and standards.

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Oranun Harnyoot, The Participation in Educational Quality Assurance of Eastern Asia University Personnel, 2014.

Appointment of curriculum administrators or curriculum takers as a mechanism for quality assurance, curriculum / field of study, it has the following functions.

- 1) Development / improvement of curriculum / fields to modern curriculum according to progress in the field science.
- 2) Assignment of instructors and course management in courses to provide students with quality knowledge.
- 3) Supervision and monitoring of learning plans (TQF 3 and TQF 4) and assessment, teaching and assessment of Curriculum/fields (TQF 5, TQF 6 and TQF 7)
- 4) Topic control, independent studies and thesis in graduate programs, to be consistent with the subject and the progress of science. Including supervising and publishing works in graduate programs.
- 5) Evaluation of independent studies and thesis in graduate programs. Develop / improve the curriculum and the curriculum in the curriculum is updated according to progress in the field of science.

#### **5.3.2** Suggestion to use applies

Faculty's administrators should bring the quality cycle and Four Iddhipadas as follow:

- 1) Planning The beginning of the planning process at the beginning of the academic year. The results of the previous year. Use as planning information.
- 2) Doing the operation, keeping records of the performance since the beginning of the academic year.
- 3) Checking: Perform quality assessment at the curriculum / program, and academic year)
- 4) Acting, planning, updating, and implementing improvements based on evaluation results, to improve the implementation. Including the recommendation of the University Council for prepare annual action plan and propose budget next year.

The curriculum quality and standards management with Four Iddhipadas, by the teacher and responsible Curriculum / program responsible and attentive to comply with curriculum standards.

1) Chanda is passionate and satisfied with the desire to do what is good for students. The satisfaction of love or the like in the preliminary. It stimulates thinking

and planning. As well as systematic design. Curriculum Planning in Higher Education Institutions to ensure that the education of the higher education institutions is as good as the curriculum. The principle is to encourage people to invent and plan for good quality.

- 2) Viriya, diligently tries hard to do things with endless effort and patience. Try to make quality assurance meet the target. The curriculum is taught in accordance with the objectives of the curriculum / program accordance to TQF 2.
- 3) Citta has strong determination to do things and to dedicate himself to the devotion to the things he loves. What are you doing? Let's dedicate ourselves to the dedication of the mind-set, based on the principle It's a continuation of the persistence.
- 4) Vimamsa, teachers reflect on the monitoring and planning, measurement and improvement of the problem of reliance, as instructors, they will have to improve the teaching and learning to be consistent and consistent. The curriculum quality assurance guideline for successful.

In case of need to publish the quality (TQR) curriculum in accordance with the standard framework. National Higher Education 2009, the composition of the Board of Education Quality Assessment within the curriculum level, set as:

- 1) At least 3 internal quality assessors who are qualified or related to the subject matter. Request for evaluation more than half are qualified outside the institution. And at least one of the external experts must be qualified to meet the requirements for assessment. The Chairman of the Board must be qualified from the outside.
- 2) All board members must be registered with the Quality Assessor within the curriculum level of the Office of the Higher Education Commission.

Specific Qualifications of the Internal Quality Assessment Board Course levels for each level are as follows.

- 3) Undergraduate the board has a master's degree or academic position. Assistant Professor.
- 4) Master's Degree The board has a doctorate or academic position. Associate Professor
  - 5) Doctoral degree the board has a doctorate or academic position.

#### Professor level

## 5.3.3 Suggestions for further research may be available

This research the emphasis is on quality management. This makes the school administration level. And higher education institutions. The following research is suggested as follows.

- 1) Do qualitative and quantitative research at the university level. To link the curriculum / subject to the school clearly.
- 2) Do qualitative research at the Curriculum and Faculty level. This is a link from the college level and linked to the institution level.
- 3) Do quantitative and qualitative research at the institutional level. This is a link from the curriculum level to the college level and linked to the institution level.

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## Questionnaire

## To "IOC" for PDCA's cycle and four Iddhipadas

	es that apply and in accordance with
1 0	
the truth. Which the data of fino	rmation from you will be kept secret.
Part 1: Information about the re	espondents.
1. Gender	•
() male () Female	
2. Age	
( ) not over 25 years ( ) 26-	35 years ( ) 36 -45 years
() 46-55 years () 56 years	years up
3. Education	
( ) Bachelor(undergraduate)	( ) Master degree (M.A./M.S./M.B.A.)
( ) Doctorate (PhD./DBA./DP	A.) ( ) Other (please specify)
4. Your Position	
( ) Personal to IQA(SAR)	( ) Teacher/Instructors
( ) Head/Chairman of Program	n ( ) Other (please specify)
5. Marital status	
( ) single ( ) Monk/Bhikkl	nu ( ) married (living together).
( ) Married (separated)	( ) widowed/divorced
Part.2 You have any comments for	the following, By the numbers
represent the following:	<i>5</i> , <i>t</i>
5 means the most important A	Agree
4 means the most controversi	
3 means moderately critical u	
2 means less important disagn	
1 means the least important s	

**Questionnaire**– To Check IOC for the quality assurance criteria.

Implementation of the quality assurance system : PDCA	+1	0	-1	Opi- nion
---	----	---	----	--------------

1.Planning			
1.1 Quality Assurance Department has the patriotic to quality assurance planning. The study clearly sets the committee responsible for educational quality assurance.	 	••••	
1.2 Quality Assurance Department has clearly determine quality components and the assessment clearly criteria.	 ••••		•••••
1.3 The quality assurance department has documented arrangement and manual the educational quality assurance, to all levels of personnel to guideline the implementation of educational quality assurance.	 		
1.4 All levels of personal has participation in the planning the implementation of educational quality assurance.	 		
1.5 The quality assurance department has determination for guidelines is practice and internal quality assessment objectives clearly.	 ••••	••••	
2.Doing			
2.1 Action plan for educational quality assurance in the curriculum level, Instructors have the diligence to implement it as planned always.	 	••••	
2.2 The quality assurance department there is the public relation by the operation plan to the educational quality assurance for the personal concern with the educational quality assurance all level, to percept prior to implementation.	 		
2.3 The quality assurance department there is the conducts to the educational quality assurance to follow the component and evaluation criteria determine in the plan and Educational Quality Assurance Manual.	 		
2.4 The quality assurance department there is promoted and supporting the facility to the personnel convenience to work smoothly and efficiently.	 	••••	
2.5 Quality assurance department there is the personal or groups to prepare documents and any evidence to relate, cover the component to mission with the assigned to inspection and the quality assessment of the curriculum.	 		
2.6 The quality assurance department there is conducts a self-assessment report (SAR) that matches the actual situation.	 		

3 Cheeking		
3. Checking		
3.1 The quality assurance department there is pay attention to control for monitoring and supervising the implementation of educational quality assurance in the curriculum is the continuous intermittently.	 	 
3.2 The quality assurance department there is the internal quality assurance committee, the knowledge. Ability and skill in auditing.	 	 
3.3 During quality assurance, personal and instructors to participated in providing data factual to the audit team.	 	 
3.4 All level personal in the educational institute to co- operate for receive the Educational Quality Assurance audit.	 	 
3.5 Quality Assurance Department is ready to receive the educational quality assurance.	 	 
3.6 The quality assurance department there is doing the self-assessment report, Request the educational quality assessment.	 	 
4. Acting		
4.1 The quality assurance department there is Considered to ponder the results of the quality assurance the curriculum or Faculty, to personnel at all levels know the weaknesses - Strong points by the follow truth and clearly.	 	 
4.2 The instructors to take Information for reports the self-assessment (SAR) to improve and develop the responsible work.	 	 
4.3 The quality assurance department has taken the consider results and ecommendations of the annual year to quality assessment committee to plan for the next year of study.	 	 
4.4 The quality assurance department set up indicators to evaluate the success of the implementation of the annual year plan clearly.	 	 
4.5 The quality assurance department has the consider to take evaluated in the planning to improve, develop in the next semester is better.	 	 

Part 3. To Check for IOC of the curriculum follow Four Iddhipadas

Operation by the four Iddhipadas To ensure quality education.	+1	0	-1	Opi- nion
1.Chanda:				
1.1 You have attended a quality assurance at the curriculum level and the quality assessed of the curriculum or program.				
1.2 You have participated in the plan to promote and develop academic papers and academic manage for curriculum development.		••••		
1.3 You have participated to determine in quality assurance activities at the curriculum level or program.	••••	••••	••••	
1.4 You have participated in the quality assurance at the curriculum level and describe or answer the questions of the evaluation committee.				
1.5 You are satisfied with the implementation of the personnel management and budget plan in the faculty.				
1.6 You are ready to improve and develop the quality assurance at the curriculum level or program.	••••		••••	
2. Viriya:				
2.1 You are committed to implementing a quality assurance program to continue.				
2.2 You attempts an activity to quality assurance the curriculum to be continuously and link to the academic management plan.		••••	••••	
2.3 You are committed to monitoring and evaluating the quality assurance activities of the curriculum level.				
2.4 You are committed to improving and evaluating the quality assurance at the curriculum level to link the faculty.				
2.5 You have the diligence to improve the quality of the curriculum or program to make more progress.				
3.Citta:				
3.1 You are always aware to check of the quality assurance plan in the curriculum level or program usually.				
3.2 You have a great deal of interest in improving and developing academic works or documents / texts on the				

regular basis.		
3.3 You have the attention to follow the quality assurance plan of the curriculum and the faculty usually.	 	 
3.4 You pay attention to practice the internal quality assurance of education in the curriculum level and the faculty.	 	 
3.5 You have checked and evaluating the performance of the components and indicators in the quality assurance at the curriculum to continuously usually.	 	 
4.Vimamsa:		
4.1 You have to consider ponder of the plan to use the quality assurance of the curriculum in each academic year clearly.		
4.2 You have an analysis to perform the task according to the academic management plan clearly, such as preparing documents or textbooks and research results.		
4.3 You have to solve the problem of monitoring and evaluation of the quality assessment and the curriculum standards of the educational yearly very clearly.		
4.4 You have the method to improve and develop a curriculum or program that can be standardized to register for publication in TQR.		
4.5 You are considering to review the quality assurance plan at the curriculum level or program to be better.		
4.6 You have the guideline to improve or modify and develop the curriculum or program to ensure quality and standards to be continuously and always.		
Part.4 to comments and suggestions		
1) To comments about	 	 
2) To suggestions about	 	 

# C: Questionnaire For PDCA's cycle and four Iddhipadas

.....

**Statement** to check / review pages that apply and in accordance with the truth. Which the data or information from you will be kept secret.

## Part 1: Information about the respondents.

	•
1.	Gender
	() male () Female
2.	Age
	( ) not over 25 years ( ) 26-35 years ( ) 36 -45 years
	( ) 46-55 years ( ) 56 years up
3.	Education
	( ) Bachelor(undergraduate) ( ) Master degree (M.A./M.S./M.B.A.)
	( ) Doctorate (PhD./DBA./DPA.) ( ) Other (please specify)
4.	Your Position
	( ) Personal to IQA(SAR) ( ) Teacher/Instructors
	( ) Head/Chairman of Program ( ) Other (please specify)
5.	Marital status
	( ) single ( ) married (living together).
	( ) Married (separated) ( ) widowed / divorced.
Part.	2 You have any comments for the following, By the numbers
	represent the following:
	5 means the most important Agree
	4 means the most controversial.
	3 means moderately critical uncertain.
	2 means less important disagree.
	1 means the least important strongly disagree

Questionnaire: Comments on compliance with the quality assurance criteria

Implementation of the quality assurance system : PDCA	Agre e least	Agre e less	Mod erate	Very Agree	Most agree
1. Planning	••••	••••	••••		••••
1.1 Quality Assurance Department has the patriotic to quality assurance planning. The study clearly sets the committee responsible for educational quality assurance.					
1.2 Quality Assurance Department has clearly determine quality components and the assessment clearly criteria.					
1.3 The quality assurance department has documented arrangement and manual the educational quality assurance, to all levels of personnel to guideline the implementation of educational quality assurance.					
1.4 All levels of personal has participation in the planning the implementation of educational quality assurance.					
1.5 The quality assurance department has determination for guidelines is practice and internal quality assessment objectives clearly.					
2. Doing	••••	••••	••••	••••	••••
2.1 Action plan for educational quality assurance in the curriculum level, Instructors have the diligence to implement it as planned always.					
2.2 The quality assurance department there is the public relation by the operation plan to the educational quality assurance for the personal concern with the educational quality assurance all level, to percept prior to implementation.					

2.3 The quality assurance department there is the conducts to the educational quality assurance to follow the component and evaluation criteria determine in the plan and Educational Quality Assurance Manual.	 	 	
2.4 The quality assurance department there is promoted and supporting the facility to the personnel convenience to work smoothly and efficiently.	 	 	
2.5 Quality assurance department there is the personal or groups to prepare documents and any evidence to relate, cover the component to mission with the assigned to inspection and the quality assessment of the curriculum.			
2.6 The quality assurance department there is conducts a self-assessment report (SAR) that matches the actual situation.			
3. Checking			
3.1 The quality assurance department there is pay attention to control for monitoring and supervising the implementation of educational quality assurance in the curriculum is the continuous intermittently.			
3.2 The quality assurance department there is the internal quality assurance committee, the knowledge. Ability and skill in auditing.			
3.3 During quality assurance, personal and instructors to participated in providing data factual to the audit team.			
3.4 All level personal in the educational institute to co-operate for receive the Educational Quality Assurance audit.			
3.5 Quality Assurance Department is ready to receive the educational quality assurance.			

3.6 The quality assurance department there is doing the self-assessment report, Request the educational quality assessment.			
4. Acting			
4.1 The quality assurance department there is Considered to ponder the results of the quality assurance the curriculum or Faculty, to personnel at all levels know the weaknesses - Strong points by the follow truth and clearly.			
4.2 The instructors to take Information for reports the self-assessment (SAR) to improve and develop the responsible work.			
4.3 The quality assurance department has taken the consider results and ecommendations of the annual year to quality assessment committee to plan for the next year of study.			
4.4 The quality assurance department set up indicators to evaluate the success of the implementation of the annual year plan clearly.			
4.5 The quality assurance department has the consider to take evaluated in the planning to improve, develop in the next semester is better.			

Part 3. Opinions on the management of the curriculum follow Four Iddhipadas

Operation by the four Iddhipadas To ensure quality education.	Agre e least	Agre e less	Mod erate	Very agreeabl e	Most agree
1.Chanda:					
1.1 You have attended a quality assurance at the curriculum level and the quality assessed of the curriculum or program.					


3.2 You have a great deal of interest in improving and developing academic works or documents / texts on the regular basis.	••••	••••		 
3.3 You have the attention to follow the quality assurance plan of the curriculum and the faculty usually.				 
3.4 You pay attention to practice the internal quality assurance of education in the curriculum level and the faculty.	••••	••••	••••	 
3.5 You have checked and evaluating the performance of the components and indicators in the quality assurance at the curriculum to continuously usually.				 
4.Vimamsa:				
4.1 You have to consider ponder of the plan to use the quality assurance of the curriculum in each academic year clearly.				 
4.2 You have an analysis to perform the task according to the academic management plan clearly, such as preparing documents or textbooks and research results.				 
4.3 You have to solve the problem of monitoring and evaluation of the quality assessment and the curriculum standards of the educational yearly very clearly.				 
4.4 You have the method to improve and develop a curriculum or program that can be standardized to register for publication in TQR.				 
4.5 You are considering to review the quality assurance plan at the curriculum level or program to be better.				 
4.6 You have the guideline to improve or modify and develop the curriculum or program to ensure quality and standards to be continuously and always.				 

# Part.4 to comments and suggestions

1)	To comments about
2)	To suggestions about

Thank you for taking the time to respond

# D: Sample interview form and Fields Study of the Researcher

Interview form In-depth interview
Title: Internal Quality Assurance Management based
on Iddhipada4 for Curriculum in Higher Education Institutions

Set 1: Question: In-depth Interview from expert, such as head of program or program leader, dean, vice president of academic and Office of the Curriculum in Higher Education Institute.

Background Data
GenderAgeYears
Career
Position
Start to interview time
DateMonth

## **Set 2: Content for interviews**

	Quality Assurance for Curriculum in higher education institute.
2	. Viriya-Doing is perseverance of the instructors as diligence do that, with strong
	to increase the efficiency of curriculum management to a better quality.
3.	Citta-Checking is thoughtfulness as being able mindless thought, devotion to the
	you do enhance the quality of work.

4.	Vimamsa-Acting is investigation to the instructors performs the internal quality
	Assurance for the curriculum in quality education assurance.
5.	Others-(if any)

Thank you for taking the time to respond

E: Field Interviewing of the Researcher



**Figure 1**: The Researcher was interviewing Phra Rajavachiramedi (Veera) Director of Nakhon Sawan Buddhist College, Nakhon Sawan province, December 20, 2017.



**Figure 2**: The Researcher was interviewing Phra Srinagarindra, Assistant to the Rector for Quality Assurance, Mahachulalongkornrajavidyalaya University in Wang Noi District, Phra Nakhon Si Ayutthaya Province. January 11, 2018.



**Figure 3**: The Researcher was interviewing Dean, Graduate School, Mahachula longkorn rajavidyalaya University in Wang Noi District, Phra Nakhon Si Ayutthaya Province, Thailand. February 21, 2018.



**Figure 4:** The Researcher was interviewing Dr. Wittaya Jearpant of The Higher Education Commission, December 20, 2017.



**Figure 5:** The Researcher was interviewing Mrs. Nuchnapa Ruengchai, Director Of Bureau of Standards and Quality of Office of the Higher Education Commission, December 22, 2017.



**Figure 6:** The Researcher was interviewing Asst.Prof. Dr.Chinda, Office of the Higher Education Commission, December 22, 2017.



**Figure 7:** The Researcher was interviewing Assoc.Prof. Dr.Somboonval, Vice President of Dhurakij Pundit University, December 22, 2017.



**Figure 8:** The Researcher was interviewing Dr.Jidapa Rangmesrisook Assistant to the Dean for Quality Assurance of Faculty of Liberal Arts Rajamangala University of Technology Suvarnabhumi, Phra Nakhon Si Ayutthaya Province, January 11, 2018.



**Figure 9:** The Researcher was interviewing Prof. Dr. Boonton Dockthaisong Director of Public Administration (International) Faculty of Social Sciences Mahachulalongkornrajavidyalaya University in Wang Noi District, Phra Nakhon Si Ayutthaya Province, Thailand. January 18, 2018.



**Figure 10:** The Researcher was interviewing Dr. Chananan Yuenjai, President of Pathumthani University, Pathumthani Province. April 11, 2018.



**Figure 11:** The Researcher was interviewing Prof. Dr. Chaiyong Promvong, Vice President for Academic Affairs Bangkok Thonburi University. December 28, 2017.



**Figure 12:** The Researcher was interviewing Dr. Kasem Bamrungvej, President of Phranakhon Si Ayutthaya Rajabhat University, Phra Nakhon Si Ayutthaya Province. December 29, 2017.



**Figure 13:** The Researcher was interviewing Asst. Prof. Dr. Pakin Chotivasilp, Dean of Faculty of Humanities and Social Sciences, Phranakhon Si Ayutthaya Rajabhat University, Phra Nakhon Si Ayutthaya Province. December 29, 2017.



**Figure 14:** The Researcher was interviewing Dr.Teerawat Montajayas, Deputy Dean for Planning and Quality Assurance Faculty of Education, Phranakhon Si Ayutthaya Rajabhat University, 96 Pridi Banomyong Road, Phranakhon Si Ayutthaya Province, December 29, 2017.



**Figure 15:** The Researcher was interviewing Asst.Dr. Atiporn Gerdruang, Director, Institution of Public Administration and Governance, Shinawatra University. January 8, 2018.



**Figure 16:** The Researcher was interviewing Mr.Buncha Limpabandhu Dean of Faculty of Management<sup>11</sup> Shinawatra University, Pathumthani Province. January 8, 2018.



**Figure 17:** The Researcher was interviewing Mr. Chan Charoensuk Deputy Dean for Quality Assurance of Faculty of Management Science Kamphaengphet Rajabhat University, Kamphaengphet Province. January 12, 2018.



**Figure 18** The Researcher was interviewing Asst. Prof. Ornanong Champol Director, Office of the Quality Assurance Kamphaengphet Rajabhat University, Kamphaengphet Province. January 12, 2018.



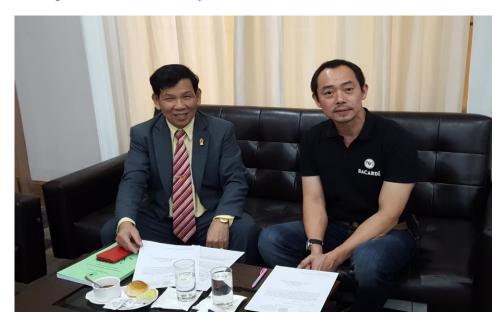
**Figure 19:** The Researcher was interviewing Assoc. Prof. Decha Puangsuegrung, Deputy Dean for Graduate School Southeast Asia University, Bangkok Thailand. January 15, 2018.



**Figure 20:** The Researcher was interviewing Dr. Jutatip Sujarakul, Dean of Faculty of Political Science and Public Administration Rajapark Institute, Bangkok Thailand. January 16, 2018.



**Figure 21:** The Researcher was interviewing Asst.Prof. Dr. Prayoon Surin, Vice President for Academic Affairs, Pathumwan Institute of Technology, Bangkok Thailand' January 22, 2018.



**Figure 22:** The Researcher was interviewing Assoc.Prof. Dr. Pongpun Rerkkumsup, Dean of Faculty of Engineering, Pathumwan Institute of Technology, Bangkok Thailand' January 22, 2018.



**Figure 23:** The Researcher was interviewing Associate Professor Dr. Vipas Thongsut, President of Nakhon Ratchasima College, Nakhon Ratchasima Province. February 8, 2018.



**Figure 24:** The Researcher was interviewing Asst.Prof.Dr.Samran Srikammul, Office of the Quality Assurance, Mahamakutrajawittayalai\_University's Salaya, Nakhon Pathom province. March 7, 2018.



**Figure 25:** The Researcher was interviewing Assoc.Prof.Dr. Suvin Ruksat, Graduate School Mahamakutrajawittayalai\_University's Salaya, Nakhon Pathom province. March 7, 2018.



**Figure 26:** The Researcher was interviewing Miss Anothai Thippanetr Assistant to the Dean for Quality Assurance of Faculty of Business Administration and Information Technology, Rajamangala University of Technology Suvarnabhumi, Phra Nakhon Si Ayutthaya Province, April 6, 2018.



**Figure 27:** The Researcher was interviewing Miss Suwanee Kulkammitam Deputy Dean for Quality Assurance of Faculty of Business Administration and Information Technology, Rajamangala University of Technology Tawan-ok, Din Daeng, Bangkok, Thailand. March 25, 2018.



**Figure 28:** The Researcher was interviewing Asst.Prof.Dr. Methaphan Photitheeratot Vice-Dean, Faculty Humanities, Mahachulalongkorn-rajavidyalaya University, Phra Nakhon Si Ayutthaya Province. March 2, 2018.



**Figure 29:** The Researcher was interviewing Nakhon Puaknumphol, Vice President for Quality Assurance of Rambhai Barni Rajabhat University, Chanthaburi Province. March 27, 2018.



**Figure 30:** The Researcher was interviewing Asst.Prof.Dr. Chumlern Kankasri **Dean of** Faculty of Communication Arts, Rambhai Barni Rajabhat University, Chanthaburi Province. March 27, 2018.



**Figure 31:** The Researcher was interviewing Asst.Prof.Dr. Natthee Sridee, Vice-Dean, Faculty Humanities, Mahachulalongkornrajavidyalaya University, Phra Nakhon Si Ayutthaya Province. April 5, 2018.



**Figure 32:** The Researcher was interviewing Asst.Prof.Sasithorn Wachirapunpong, Vice President for Quality Assurance Thepsatri Rajabhat University, Lopburi Province. April 7, 2018.



**Figure 33:** To Interviewing Assoc.Prof.Dr.Wittaya Chinnabutr Dean of Faculty of Political Science, Pathumthani University, Phathumthani Province, April 11,18. **Figure 34:** To Interviewing Assoc.Prof"Dr.Thanakhon Thanaruchckote Dean of Faculty of Business-Accounting, Pathumthani University, April 11, 2018.



**Figure 35:** To Interviewing Asst.Prof. NaRuemol Thananant, Vice President for Quality Assurance of Valaya Alongkorn Rajabhat University, April 18, 2018.



**Figure 36:** The Researcher was interviewing Asst.Prof. Dr. Nawin Promjaisa, Assistant to the President of Chiang Rai Rajabhat University, Chiang Rai Province. April 28, 2018.



## **Biography**

Name and Surname Assoc.Prof. Aphinant Chantanee

**Date of Birth** February 28, 1950

**Education** Master of Economics in Peace Studies,

Krirk University, Bangkok, Thailand

Bachelor of Arts (Political Science),

Ramkhamhaeng University, Bangkok, Thailand

Certificate ISO 9001 and TQM,

University of Northumbria and Newcastle, England

### Jobs and work experience

Head of Economics Department, Head of Research and

Public Affairs, Head of Research and Education Service

Dean of Faculty of Management Science, Committee of

Academic Council. Committee of Peer review of

Academic result, Committee of University Council,

Chairman of Instructors Council and official, Chairman

Assessment/Evaluation of Curriculum and Faculty,

Chairman Assessment Institute/University level, Peer

review

Committee, Consultor Chairman for Thesis and

Dissertation.

Current Address 2 Moo 199/538 Soi-City12 Sub-district Klongsuanplu,

Phra Nakhon Si Ayutthaya province, 13000

Moble. 085-4217676

email: Aphinant2017@gmail.com

#### **Academic achievement**

**Research** Assoc.Prof. Aphinant Chantanee. **Management of doctoral** 

Programs in public and private universities. Journal of

Social Science, 2012.

Assoc. Prof. Aphinant Chantanee **Economy of Amulets in Thailand**, Journal of Graduate Study Valayaalongkorn
Rajabhat University.2016.

Aphinant Chantanee. Buddhist Political Science for Promotion of citizen stability. Journal of Social Science, 2018.

## **Articles**

Assoc. Prof. Aphinant Chantanee. The using four Iddhipada in the Hunan Resource Management of District Municipality. Journal of Rajapark Institute, 2018.

Assoc. Prof. Aphinant Chantanee. Management of Subdistrict Administrative Organization for Public Service of Local Government with Suppurisadhama 7. Journal of Social Science, 2018.

#### **Books**

Assoc. Prof. Aphinant Chantanee. Micro - Economics 1.
Bangkok: Company Pitakuksorn Printing Ltd, 2009.
Assoc. Prof. Aphinant Chantanee. Advanced Management
Research methodology. Bangkok: Jaransanidwong company, 2016.

### **Translation work**

Assoc.Prof. Aphinant Chantanee and Team. **Social science** research Methodology. Bangkok: Jaransanidwong company Ltd, 2018.