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

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CHAPTER 2
THEORETICAL ORIENTATION AND REVIEW OF THE PAST STUDIES

2.1 INTRODUCTION

The present chapter concerned to the theoretical orientation regarding the meaning of professional teachers and teachers' competencies, different aspects of professional teachers, teachers' competencies standards. This chapter also present the review of the past researches related to the teachers' competencies studied in Thailand and in foreign countries.

2.2 MEANING OF PROFESSIONAL TEACHERS

Teacher referred to the person who teaches in the education institute of the primary education and the secondary education, in the private sector and the state sector, of various education areas, and such education institutes manage the education in the Basic Education.

According to the Basic Education Curriculum, A.D. 2008, the teachers must be develop into the professional teachers. Formerly the word "Professional" was used vaguely, and only meant for sportsman. This word is meant for persons with a specific career where other people would not be able to execute. This means that the "Professional" refer to a talent person in his own work. He is usually versed on a specific subject with a high theoretical qualification. He is able to adopt the subtle method in the suitable application of the knowledge to the day-to-day functions; (Parkay & Stanford. 1992:410).

The word "Profession" has been defined in the sixteenth century in England, in referring to a person who acquired knowledge on the law and the doctor, with following criteria: (Duke. 1990:258).
1. The basic knowledge which is the affirmable science.
2. Emphasize on servicing others.
3. Perform on specialized duty.
4. Controlled functioning standard.
5. Obtain a unique society.
6. Some of them issue certificates.
7. Able to apply for copyright on one's own idea.

The word "Professional" is used to call the person who studied the particular subject profoundly, with a long training; (Berliner. 1992:227). In the operation, the focus is rather on the brain work, rather than on the manual work; (Kierstead & Wagner. 1993:146).

Ministry of Education (2004:7) alleged that a professional teacher is the person who is ready in every aspect in becoming a teacher. He should be vested with the knowledge, ability, and skill in educating students in every respect. His deportment should be proper, and he should be attentive in taking care of the students. He should also attain the pedagogic spirit, and perform his instructional duty through the pedagogic soul. The teaching vocation is for a person who makes a living to earn an emolument for his own subsistence, sans pedagogic spirit.

The Royal Institute Dictionary, A:D. 2005 (2005:170, 939) gave a definition on the word 'teacher' that it refers to the teacher of students, and who purveys the knowledge to them. The work "Profession" refers to the subsistence, the career, and the routine task for sustenance. The National Education Act, A.D. 2001, gave the definition of 'teacher', that it refers to the vocational personnel who performs the main duty on teaching & learning, and support the learning of learners through various means in the government and private education institutes; (Ministry of Education; 2002:6).

Therefore, it can be concluded that the "Professional teachers" refers to the person with a permanent work to earn the living through the teaching or supporting the learning of others in the government or private institutes, with the consciousness, the knowledge, and the skill in the educating.

The word "Professional" usually refers to the persons who have to use the skill, with a specific ability in performing the work. They are usually versed in a specific skill, and acquired a high level of theoretical knowledge, adopting a clever method in applying knowledge to the day-to-day operation, suitably, with following characteristic:

(1) Able to create the cognizance and the servicing method by themselves.

(2) Able to work independently by themselves.
(3) They are usually well trained, with a long experience in education.

(4) They are excellently attentive on their clients. They continuously develop themselves to give a better service on their clients. This service usually stresses on the brain work rather than the physical work.

(5) They govern themselves well, with the social system. The research is an important part of the operation. They are able to manage their own functional process, with a control on the working time. There is a standard of etiquette, and a professional discipline.

(6) The knowledge and skill of a professional can be distinguished from others.

(7) They become content with the reliance from the community, and able to give a quick service, that is precise and suitable to the situation.

(8) They are rather interested in the dignity and fame than rewards from monetary rewards.

Ballatin (1997:145) stated that the attribute of a professional is as follows:

(1) Specialized in a specific subject, with a profound knowledge.

(2) Adhere to his own profession, with a pride in his own ability.

(3) Able to give excellent services in his specialized field.

(4) Authorized and take responsibilities in adopting such ability.

(5) Emphasize on servicing each customer.

Bliss, Firestone & Richards (1991:144) stated that a professional is the person who:

(1) Attains the principle of knowledge.

(2) Adopts a high level of control in accepting new members.

(3) Acquired a long professional training.

(4) Achieved a Monopoly of Service.

(5) Practices on the etiquette.

(6) Faithful to the service user.

(7) Respected by the community.

Sayer (1996:18) alleged that the general characteristic of a professional is:

(1) Gives a suitable social service in important aspects.

(2) Able to execute researches, with an ability to study by himself.

(3) Educates and trains students in a long period of time, with true knowledge, and
continuous skill development.

(4) Attains the knowledge and ability, acquired from his own professional development.

(5) Employs a high responsibility, with ability to more efficient implementation.

(6) Acquires the honesty, the consciousness, and the advertency on the client service.

(7) Emphasizes on the implementation rather than written descriptions.

(8) Adopts self-discipline with a high etiquette.

(9) There is a strict control on the enrollment, the training, the issuance of certificates, and the operation criteria.

Duke (1990:258-259)\textsuperscript{11} refers to the attribute of professionals as follows:

(1) Acquires some authorities over some rules pertaining to the particular profession.

(2) Associates with the fame, the honor, the subsistence potentiality, and the authority.

(3) Acquire the independence in conceiving and working.

(4) Attains a personal norm and ethic.

(5) Adopts an interpersonal care in the expertise of each person.

(6) The interrelationship remains on the basic of acquiescence on the expertise of each person.

(Kierstead & Wagner. 1993:148)\textsuperscript{12} stated that the professional characteristics of teachers have three aspects:

(1) Suitable client service, with a specific identity.

(2) Acquired the personal cognizance.

(3) Be independent in the operation.

Bauman (1996:99)\textsuperscript{13} studied the concept and the theory, and concluded that the professional is the culture on the values, the norm, the right, and the mental rule, which is the decisive procedure for others. Therefore, the study on the professional pertaining to the value and the norm, associates with the learning culture. The professionals would emphasize on the exuberance, the mutual mindfulness on the personal development in the profession, as well as on the general human development.

From the documentary study, it is apparent that the characteristics of a professional is as follows:
1. The attribute of a professional should be:

1.1 Acquire reliable technical knowledge and ability in the field.
1.2 Obtain a personal entity.
1.3 Being proud in one's profession.
1.4 Attain the discipline and ethic.
1.5 Adopt a high responsibility.
1.6 Rather proud in the implementation than on other emolument.

2. The operation which a professional may perform is as follows:

2.1 Specialized operation.
2.2 Stresses on the client service, per individual, or per case.
2.3 Work independently.
2.4 Able to create one's cognizance and procedure.
2.5 Able to quest one's own knowledge.
2.6 Acquire standard control system amongst the professionals.
2.7 The research is a normal operation.

3. The manner in the profession of a professional should be as follows:

3.1 A continuous self-development.
3.2 An incessant development on the knowledge principle.
3.3 Develop and maintain the standard of colleagues.

2.3 DIFFERENT ASPECTS OF PROFESSIONAL TEACHER

Since there had been an ample study on the attribute of teachers, therefore, this study works on the attribute of professional teachers, pertaining to the general attribute of professional teachers, the attribute on the knowledge and skill, the attribute on the concept, the attribute on the values, the attribute on the ability, and the attribute on the profession, consecutively.

2.3.1 The General Characteristics of Professional Teachers

"Professional teachers" acquire a unique characteristic through a good training in becoming teachers; (Berliner. 1992:227)4. The intellectual quality with omniscience is the quintessence of the particular field, and also the ability of the
professional teachers; (Sayer. 1996:12)\textsuperscript{16}. They are independent in the conceiving, and are also free in making decisions on their functions according to the academic principle, and to their own expertise, to gain achievement for students. They are also able to stipulate the operational objective and criteria, as well as the perspicuous evaluation standard; (Scheerens; 1992:22)\textsuperscript{16}. They are dexterous and energetic, and able to apply their experience in solving problems effectively; (Berliner. 1992:235 – 237)\textsuperscript{17}. They are accepted by the community in their expertise. They constantly adopt a strict control system on themselves and colleagues; (Bliss, Firestone & Richards. 1991:144)\textsuperscript{18}. Moreover, they are also attentive in the teaching and developing each student. They accept and concede to the inspection in accordance with the academic principle; (Bliss, Firestone & Richards. 1991:146; \textsuperscript{19} Goens & Clover. 1991:268; \textsuperscript{20} Sayer. 1996:9\textsuperscript{21}). They focus on the morale and spirit of students, and also on their attainment of a good social maturity; (Arends. 1997:5)\textsuperscript{22}.

Glickman (1998:362)\textsuperscript{23} adverted that the genuine professional teachers alludes teachers who manage a participative learning & teaching, adopt a cooperative strategy in the learning, and is clever in integrating methods suitably for the utmost efficiency for students. Moreover, they are able to synthesize the learning & teaching methods to create new learning & teaching methods.

Goens & Clover (1991:268-269)\textsuperscript{24} indicated that professional teachers would perform in their utmost capacity, through following mental attributes:

(1) Prefer the prideful reward to rewards from others.
(2) Like changes, and constantly propose new ideas.
(3) Always develop the knowledge and ability.
(4) The status of teachers depends upon the knowledge and skill.
(5) Each teacher has his own working goal.
(6) The teamwork arises from the consequence of an action, and the evaluation is varying important.
(7) The basis of a leadership arises from the inspiration as well as the knowledge and capability.
Hoy & Miskel (1996:328-329) asserted that the instruction is a professional work. Whereby the attribute of a professional teacher can be classified into four aspects:

1. General Knowledge: The knowledge is a very important basis. The knowledge is acquired from the study and the training. Such knowledge must be self-systemized; and the discernment in this structure is specific, and enables the solution on complicate problems.

2. Regulations and Control: Such regulations and control specifically refers to the self-control ability, enabling a person to perform various things by themselves, within one's own knowledge and skill, with a willingness to be checked by other professions.

3. Ideology: The ideology is an important basis in conducing the professional teacher values; such as the consideration on the development of students, the wise conception, etc.

4. Association: The group of professionals usually associates amicably. The interrelationship of professional teachers enables the better efficiency in the decision making and the group operation.

Bliss, Firestone & Richards (1991:8) stated that a professional teacher should have following qualities:

1. Attains the knowledge in teaching.
2. Knows what to do within the school.
3. Enjoys one's own work, and accomplishment.
4. Supports the school culture.
5. Feels the self-empowerment, which enables him to operate and take decisions by himself.

Clark (1995:4-6) proposed the professional attribute in following aspects:

1. Instruction: This is considered from the teaching process, and the teaching outcome. The students would achieve a good learning, should the teacher spends more time with colleagues than to work alone. Hence, there would be an interchange of ideas in the pedagogy, pertaining to the significant tripartition in the proffering of knowledge, the interrogation, and the respond to students when they have given their answers.

2. Teacher Conception: The teacher conception is very important in the teaching and is also a very important basis of teachers. Because this associates with the planning, the
decision making, and this effects other behaviors, since teachers have to be observers, and analysts, with an ability to sequence the operation with a consecutive and relative outcome.

The criteria of professional teachers as stipulated by The American Association of College Teacher of Education (AECTE) are as follows: (Kierstead & Wagner. 1993:147)28

1. Be responsible to the community.
2. Become a literati, and able to sequence important matters.
3. Acquire the knowledge, with a good training, conducting the genuine dexterity.
4. Achieve adequate knowledge to make responds to students.
5. Capable of self-study, from the knowledge and skill development.
6. Acquire the connective management ability, with the ability to keep things in order all by himself.
7. Adopt a suitable criterion.
8. Employ a suitable monitor system.
9. Achieve a tremendous reliance from the committee.
10. Obtain a high incentive in giving services, with an energetic working force.
11. Each unit is authorized in the autonomous operation.
12. Obtain autonomy with a high responsibility.

Ministry of Education (2005: 218-220)29 stipulated the attribute of the axial teacher to develop the prototypic teacher through the three aspects of component.

1. Personal quality (weighs 25%)
   1.1 Acquire the integrity, with a good conduct as an exemplar.
   1.2 Be kind to students.
      a. Obtain the love and faith on the teaching profession.
      b. Acquire a good personality and interrelationship, with an ability to subsist and cooperate happily with others.
      c. Inculcate, train, and reinforce the knowledge, skill values, including the good habit to students.
      d. Acquire a creative thinking with good discernment.
      e. Able to give advices on the education and in life.
f. Execute incessant studies, researches, and quest for information in a continuous self-development to cope with the current situation.

(2) Pedagogy (weighs 50%)

a. Acquire the knowledge and understanding on the curriculum including the contents, the nature of the subject and the nature of learners.

b. Obtain the competency in managing the learning process, implementing a sustainable achievement for students.

c. Develop the learning & teaching innovation, focusing on the student centered.

d. Be competent in creating an atmosphere that is subservient to the learning.

e. Achieve the ability in measuring and evaluating learners in the true circumstances.

f. Able in the research and studies to develop the learning.

(3) Teacher Colleague Development (weighs 25%)

a. Having a faith to become an axial teacher.

b. Willing to give assistance to colleague teachers.

c. Organize suitable time and activities on the supervision to the teacher network.

Sawittri Supphahirun (2005: 24) commented on the new concept of the teaching vocation that the teaching profession or the teaching vocation is a high level profession, which needs a training to attain a good attribute for teachers. Various attributes arises from questions of “what the competence of teachers?”

There are five aspects of “Competence of Teachers” upon an extensive basis.

(1) Pertaining to the instruction.

(2) Pertaining to the training, the guidance, and the governing on students.

(3) Relating to various school activities.

(4) Regarding to the good rapport and the community cooperation.

(5) Appertaining to the professional teacher.

From an analysis on the National Education Act, A.D. 2001, it was found that the required the competence, and the attribute of teachers should be as follows: (Ministry of Education. 2005:1-25)
(1) Teachers must be able to organize a participative education for the community in the pedagogy; (Article 8). Consent and able to organize the participation of individuals, families, communities, community organization, local administration community, private individuals, private organizations, vocational organizations, religious institutes, operating places, and other social institutes, in the suitable pedagogy; (Article 9) (6).

(2) Teachers must be capable in the implementation for individuals, families, communities, community organization, local administration community, private individuals, private organizations, vocational organizations, religious institutes, operating places, and other social institutes, in the mobilization of education resources; by being an organizer, or by participating in the organizing, as deemed suitable; (Article 9) (5) (Article 58).

(3) Teachers must be competent in the research to develop a suitable learning for learners, and able to develop the content and the learning process incessantly; (Article 8).

(4) In organizing the learning process, the teacher (the education institutes, and related units) should obtain following competency: (Article 24)

a. Arrange the contents and activities to coincide with the interest and the aptitude of learners, keeping in mind the interpersonal differences.

b. Train the skill, the thinking process, the administration, the situation confrontation, and the application of the knowledge for the problem solving and preventing.

c. Arrange the activities in such a way that learners can learn from the actual circumstance. They should be trained in the implementation ability, and the ability to think. They should also love to read and quest for the knowledge ceaselessly.

d. Arrange the learning & teaching through the integration of content and knowledge on various aspects proportionately and equally. Whereby, the virtues, the good values and the required attribute should be implanted in every subject.

e. Able to organize the atmosphere, the ambience, the learning media, and the research ability which should be a part of the learning process.

f. Able to manage the learning to occur on any time and at any place.

g. Capable in coordinating with parents and every party of community individuals in developing learners according to their own capacity.

(5) Teachers must obtained the ability in preparing the contents in the curriculum pertaining to the problematic situation in the community and in the society; as well as the contents of
the local knowledge, and the required attribute for learners to become good members of the family, the community, the society, and the nation; (Article 27). In this case, there should be a variety of content, suitable to the age and the potentiality. Whereby, the curriculum should insert the academic content as well as the vocational content to develop people equably, pertaining to the knowledge, the conception, the ability, the virtue, and the social accountability; (Article 28).

(6) Teachers must be able to manage the learning process for the community; (Article 29).

(7) Teachers must obtain the cognition on the quality guarantee, internally and externally.

(8) Teachers must be able to pursue the quality guarantee procedure, and to accede on the inspection, the report, the information to be inspected, the responsibility, as well as the acceptance on the circumstance to be reconditioned; (Article 47 – 50)

(9) Teachers must be able to abide the teaching profession quality standard, and the vocational etiquette according to the teacher profession organization, (Article 53), and the personnel management of the Teacher Civil Service in the Central Organization; (Article 47 – 50).

(10) Teachers must satisfy in the social status and the profession.

(11) Teachers must be able to introduce resource persons into the community, to participate in the suitable pedagogy.

(12) Teachers must be competent in applying, producing, developing, and maintaining the education media and technology; (Article 65).

(13) Teachers must obtain the ability to organize the learning & teaching, in such a way that learners are able to apply the education technology in the first opportunity, so that they acquire sufficient knowledge and skill to apply the educational technology in questing for knowledge by themselves continuously through out their lives; (Article 66).

2.3.2 The Knowledge Characteristics of Professional Teachers

Clark (1995: 7-8) mentioned that the professional teachers should have good Knowledge. The knowledge that teachers have to attain is as follows:

(1) Achieve the knowledge in the subject content.

(2) Obtain the general knowledge in being a teacher.

(3) Attain the knowledge on the curriculum.

(4) Acquire the instruction knowledge according to the content.
(5) Achieve the knowledge on students.
(6) Acquire the knowledge on the educational context.
(7) Obtain the knowledge on the education target and values

Ministry of Education (2005:1 - 25) found the requirement of professional teachers as follow:

(1) Acquire the knowledge and understand that 'the education' is 'the learning process' for the exuberance of the individuals and the community, through the conveyance of knowledge, training, exercises, the cultural inheritance, the academic progress creativity, the origination on the cognizance from organizing the environment, the society, the learning, and the supporting factor for the continuous life-time learning of individuals; (Article 4).

(2) Attain the knowledge and understanding in 'the Education Standard', which is the provision on the required attribute, quality, and standard in every education institute. This is used as a principle in collating, supporting, and monitoring on the quality inspection and guarantee; (Article 4).

(3) Acquire the knowledge for development of the repletion of students, mentally, physically, and intellectually, as well as on the knowledge, the integrity, the ethics, and the culture in the subsistence, with a happy compatibility with others.

(4) Acquire the knowledge and understanding, with awareness and competence in organizing the learning process, aiming on the implantation of following factors for students; (Article 77)

   a. The right consciousness on the democratic, headed by the monarch.
   b. The learning to maintain and support the right, the duty, and the freedom.
   c. A respect on the law, with parity, and the human dignity.
   d. To be proud in being a Thai citizen.
   e. Learn to take care of the overall benefit of the whole and of the nation.
   f. Support the religion, the art, and the national culture.
   g. Support and partake on the sports, the local knowledge, the Thai knowledge, and the international knowledge.
   h. Conserve the national resources and environments.
   i. Capable in earning an honest living, with self-reliance.
j. The creativity, the keenly interested in learning, and the continuous self-study.

(5) Acquire the knowledge and understanding in managing the education opportunity, so that the disadvantaged would equally benefit from the education; (Article 10).

(6) Obtain a good knowledge and a good thinking, with a perception that every learner is able to learn and to develop themselves, and that learners are most important in the pedagogic process. Whereby, learners must be supported to develop themselves naturally to their full capacity; (Article 22).

(7) Acquire the knowledge, the conception, the cognition, and the ability to manage the learning process so that learners can achieve the knowledge, the conception, the virtue, and the integrity in following aspects:

a. The knowledge about oneself, and the association of oneself to the community, such as the family, the community, the nation, and the world society, including the knowledge pertaining to the history of the Thai society and the political system of democracy, headed by the King.

b. The knowledge and skill on science and technology, including the cognition, and the experience on the management, the maintenance, and the exploitation from the natural resources, equably and sustainably.

c. The knowledge pertaining to the religion, the art, the culture, the sports, the Thai knowledge, and the application.

d. The knowledge and skill on mathematics and linguistics, emphasizing on the correct usage of the Thai language.

e. The knowledge and the skill in making a living and in the happy subsistence.

(8) Acquire the knowledge, the understanding and the realization and the ability to evaluate learners, considering the development of learners, and their deportment. This can be obtained through the observation of their learning behaviour, their activity participation and tests, coupled with a suitable learning & teaching process; (Article 26)

Sawitri Supphahirun (2005:26) stated that teachers should know as follow:

(1) Liberal Education: This is the General Education.

(2) Teaching Fields: This is the Major Subjects, and Minor Subjects.
Professional Education: This is the technical matter of Educational Foundations and Content, Educational Strategies which are the education research, the education evaluation, and the education planning, etc.

Somboon Rongkit (2005: 23) mentioned that teachers should know as follows:

1. Liberal Education: This is the general subject, which students in the Higher Education Level should know, i.e. the Thai language, the foreign languages, the social science, the mathematics, the ethics, the culture, the knowledge on the law, the philosophy, the religion, the arts, and other suitable subjects which would enable people in various vocations to get a better understanding of each other.

2. Teaching Fields: These are essential subjects for instructions called the Major Subject, and the Minor Subject.

3. Professional Education: This is the teaching subject or Education Subject, or the Science of Education, can be classified into two branches as follows:

   1.1 Education Foundations and Contents: This can be divided into various branches, such as the Educational Philosophy, the Educational Psychology, the Educational Sociology, the Educational History, the Curriculum and Instruction, etc.

   1.2 Education Science on Strategy: The education science on strategy is the education research, the education evaluation, the education planning, etc.

Parkay & Stanford (1992:20 - 21) propounded that the essential knowledge and the skill of professional teachers. The Significant Knowledge which is comprised of:

1. The knowledge on teaching subject, oneself and on students.
2. The knowledge on the education theory and on the research.
3. The significant skill which is comprised of the teaching skill or the instruction technique, the interactive skill and the Problem Solving
The National Board for Professional Teaching Standards stipulated a general criteria for teachers in five aspects: (Sadker & Sadker. 1997:512)

1. Teachers have to be willing with students, and with the learning & teaching.
2. Teachers have to know the subject he is teaching, and know the method to teach in the particular subject.
3. Teachers have to be responsible in the pedagogy, with a follow up on the student development.
4. Teachers have to think systematically on the instructive operation and on other operations.
5. Teachers are a very important part of the present learning society.

Tickle (1994:106) cited on the knowledge that teachers should have as follows:

1. On oneself pertains to the time management, the temperance, the thought, the concept, the self-respect, and the attitude in teaching.
2. The subject which is to be taught.
(3) The school expectation is for an example, the curriculum requirement.
(4) The student privacy refers to the learning requirement, the achievement, the temperance.
(5) The instruction strategy refers to the classroom arrangement, and the teaching technique.
(6) Others refer to the management on inadvertent students, and other special requirements.

It can be concluded that the knowledge to be acquired by teachers should be as follows:

(1) Knowledge on the education psychology principle.
(2) Knowledge on the curriculum.
(3) Knowledge on the contents to teach.
(4) Knowledge on the education evaluation.
(5) Knowledge on the research.

2.3.3 The Thinking Characteristics of Professional Teachers

There are many methods and types of thinking. The thinking level of people can be classified into four levels, i.e. the subconscious thinking, the basic thinking, the critical thinking, the creative thinking. The thinking can be trained; (Sermsak Visalaporn. 2004)\textsuperscript{30}. In the democratic society the critical thinking is very important, because this is the thinking method where it is required to retrospect about various events in the daily life with the rationale; (Waller. 1998:12)\textsuperscript{40}

Clark (1995:4-6)\textsuperscript{41} mentioned that the thinking of teachers is very important in the teaching and is the primary basis of teachers; because this relates to the planning, and the decision-making, effecting other behaviors. Because teachers have to become observers, and analysts, with an ability to categorize the performance conducting a relevant outcome.

The critical thinking appertains the ability in inspecting problems, questions, or situations, which are inclusive of various information, leading to an answer, or a hypothesis; (Warnick & Inch. 1994:11)\textsuperscript{42}.
The critical thinking skill is a most essential skill for teachers. Sadker & Sadker (1997:523) propounded five thinking dimensions as follows:

1. Metacognition: This is the cognition in one's own thinking about one's own.
2. Critical and Creative Thinking: This is thinking for the learning achievement of learners, with an elucidative technology. The creative thinking is to originate new events in the learning & teaching.
3. Thinking Process: This is a thinking process which can collate and integrate the experience, the subject principle, the problem solving, the decision-making, and the research.
4. Core Thinking Skill: The core thinking skill is a very important skill in generating a more generative dimension.
5. The Relationship of Content-Area and Knowledge to Thinking: This is a relative thinking between the knowledge and the purview of the subject content.

The critical thinking is a concept derived from the conceiving inference. Quite a number of people adopted reiterative reflections, and is usually the rational thinking to constitute a reliable determination; (Bensley. 1998:5). The critical thinking is a process generated from the evaluation, which had been concluded from elucidated information. Such conclusion may occur from true events or may occur from one's own imposition through a compilation from the platitudinous possibilities and impossibilities. Following significant thinking factors have been proposed as demonstrated in the Illustration 7.

![Critical Thinking Generator](Eggen & Kuachak. 1996:54)

Figure 2.2: Critical Thinking Generator (Eggen & Kuachak. 1996:54)
Another significant thinking of teachers in the pedagogy is the System Thinking. Because everything is interrelated, such as the subtlety of causes, the interrelation of various factors, the interchange between the cause and the consequence; (Salomon; 1992:42). The system thinking refers to the cognition that everything in this universe is systemized, and is a reproductive working unit, with a process and an input. There are also sub-systems, and mega-systems; while an output of one unit would be the input for another unit; hence, becoming an endless cycle.

A professional teacher is responsible in developing individuals to develop the society. Therefore, it is utmost essential that teachers are capable of the critical and creative thinking. Because apart from the learning support, they must also be competent in stimulating or prompting the conception and the problem solving skills on students; (Scribner. 1999:240). This means that without a correct way of thinking for teachers, there may be problems in the learning & teaching and in one's performance as well. A suitable thinking for a professional teacher is to determine on servicing students, so that their projects be implemented, or to see their parents if they have problems; (Rebore. 998:319). Therefore, a professional should acquire a good thinking attribute, which is a critical and creative thinking.

2.3.4 The Values Characteristics of Professional Teachers

The Royal Institute Dictionary (2005) gave a definition that the word 'value' refers to "the benefit in any one thing which cannot be evaluated monetarily, or even the benefit in any one thing which can be estimated in money, such as a gold ingot is more valuable than a rock". While the word "admire" refers to the act of conceding and praising. (Royal Institute Dictionary. 2005:182, 449).

Sahachai Pongmala (2005: 85) stipulated that the word 'values' refers to a certain condition or action which we believe in or admire that should be adhered to in order to achieve the objective or purpose for ourselves or for the society; (Soontom Kotbantao. 2004:102). It is apparent that whatever has been evaluated or mentally determined is called 'values'. This means that this word appertains the price or the worth; (Kimbrough & Nunnery. 1988:395). Therefore, the word 'values' may refer to the admirable self-worthiness.
The definition of "values" had also been given in many more aspects, such as, the 'values' is the basis of a creed; (Peter & Waterman. 1984:281)\(^53\). This is a basis in the comportment of thoughts, the learning theory, the working target, including the norm. The values represent each individual, the team work, the leader, and the students. Moreover, values are also the basis to generate policies; (Dalin. 1993:8)\(^54\). Values are what each individual cogitated, or believe that it would give some benefit or happiness. Values are generated from the mind, and compelled to generate requirements and different behavior in different circumstances; (Huges, Ginnett & Curphy. 1993:167)\(^55\). Whatever is called values must be generated from a consciousness. Values are a basis of knowledge and thoughts for requirements, which enables the apperception and cognition on all actions; (Hoy & Miskel. 1996:104)\(^56\). This is an individual's belief and concept to accept any one thing reasonably, or to accept any condition or behavior admired by individuals or the community, deeming that it is worthwhile for the conduct. Therefore, such values are conceded as a consistent operation procedure. Such values might be perpetual, or temporary to attain the object for oneself, or for the organization; (Yongyut Ketsakorn. 2004:17)\(^57\). Williams. (1998:39; citing Ravlin. 1995:598)\(^58\) gave a definition that 'the values' refers to a set of creed enabling each person to act overtly in various circumstances.

On the organization values, the word 'values' refers to the requisition engendered within the minds of colleagues; (Hoy & Miskel. 1996:130)\(^59\). This is the basic thinking and the belief in assigning a definite accomplishment for colleagues; (Sherman & Bohlander. 1992 : 63)\(^60\). This means that it is appreciated by the organization. While each part of the teamwork might appreciate in following factors, such as the reciprocative response, the honesty, the un-concealment, the mutual caring, the love, the teamwork, the amicable development, the freedom, and the interrelated equity.

It can be concluded that 'values' refers to the basis of the concept and the action of sensible individuals. And values are generated from the inference and evaluation from the whole of past experience. Values would become a norm in thinking, accepting, determining, and performing in future events of different circumstances.
Best organizations are generated through the value driven; this would engender the ambition for the teamwork, with an increment on the caliber and the integrity; (Hughes, Ginett & Curphy. 1993:167) \(^1\). This shows that values are significant properties for an organization. Should a leader be capable of transforming the organization in such a manner of shared values, then it is considered that this is a change at the level of the organization culture, conducing a leadership for the organization; (Schein. 1992:1) \(^2\).

Moreover, should personal values of individuals in the organization be in consistent with the organization values, and then each individual would become creatively conscious in their incumbency, enabling an unexpected efficiency. It is apparent that values are the basis of the thought and the evaluation of what is in the mind, enabling the determination on the worthiness for the comportment, which is compatible to the attitude, but it lies in the basic level, and is more profound. Moreover, values can be augmented, or developed, or even created; (Berliner & Caehee. 1996:289) \(^3\).

Sahachai Pongmala (2005: 87) \(^4\) alleged on the generation of values that it starts from the need or the desire. That is when a need occurs; the next stage would be the preference, or the interest. Such preference would instigate on the admiration or the belief in the particular subject leading to a value. A fixed value would incite the mental ardency with a determination to operate, which is called the attitude. With such stance, the individual would be impelled to perform or put into action. Such doing would conduce learning, in the saying 'Learning by Doing'.

Moreover, (Soonthorn Kotbantao. 2004.11) \(^5\) appropriated the values into two categories, adhering to the professional principle;

1. Basic Value: The basic value is composed of following values, i.e. the morality, the virtue, the tradition, the culture, and the law.

2. Professional Value: The professional value is comprised of following values, i.e. the professional ideal, such as the ideal of an educator in the service, the research, the origination of new ideas; the professional discipline; the professional demeanour; and the professional act.
A teacher should attain a good professional value, a good attitude to the teaching profession, without contempt on the teaching profession. There are two aspects in the teaching professional value, i.e. the intrinsic value, which is the achievement value in the teaching profession. This is the professional pride, and is also the best of values. While the extrinsic values are the applause and encouragement, the promotion, the raise of salary, higher income. Such values arise from the proffering by others; (Taweep Apisit.2005:213)

Holmes (1993:61) believes that appropriate teachers should obtain the spirit of a professional teacher in the following manner:
(1) Create the work within the scope of knowledge and concept which they are versed.
(2) Attain a very high self-containment amongst professional colleagues.
(3) Adopt a one-to-one relationship with clients.

Glatthon & Fox (1996:16-17) inferred on the values of teachers that:
(1) The learning is the main incumbency.
(2) There is a learning atmosphere; while the cooperation would enable a continuous development.
(3) The teaching is a profession that should be exalted.
(4) Adhere on the accomplishment values in the performance and in the cognition of production.

It can be concluded that a good attribute on values of professional teachers should be as follows:
(1) Become resolute in the self-development.
(2) Become determined in the attainment of the work.
(3) Attempt to develop each student.
(4) Attain a democratic mind.
(5) Acquiesce on the inspection.
(6) Become proud in the teaching profession.

2.3.5 The Teachers Potential Characteristics of Professional Teachers
Ministry of Education (2005: 56) stated that it is necessary to develop the potential characteristics of professional teachers. They should have the potential on
learning & teaching systems, measurement and evaluation, teachers' competency, aptitude, interest, and attitude about learning & teaching data and information, curriculum development, and guidance. These require systematic procedures, supported by effective factors and various innovations. There should be systems of sharing experience for mutual benefits, between learners and teachers to accelerate effective learning system.

Teacher's potential development aims at creating academic leadership and competency in conducting research for learning development. Co-operation should be sought from leading teachers, model teachers, higher educational institutions such as Faculty of Education of universities and professional organizations. Teachers should be trained on curriculum development, management of basic education learning procedures which apply effective learning standard for measurement and evaluation. Formulation of basic education curriculum needs decisions from educational institution administrators, teachers, parents, guardians, community and local wisdom leaders.

2.3.6 The Career Development Characteristics of Professional teachers

Sueanne M. (2004) inferred on the concept of Career Development Characteristics of Professional teachers that the teaching subject or the teaching profession is high level profession, which need a good training to acquire a good personality on become a professional teacher. Teacher have to accumulate their knowledge on the teaching profession, through the writing, speaking, and technical research. They should be good member of the Academic Association, with a strict abidance on the consuetude. They should also support their own perceptual proliferation on the Education Science, while giving good advices to new teachers and the apprentices within their schools.

The Career Development Characteristics of Professional teachers should be as follow:

(1) Knowledge development

Teachers should acquire knowledge for career development i.e. the knowledge on oneself and on students, the knowledge on principle of educational psychology, the knowledge on curriculum, the knowledge on teaching subject, the knowledge on teaching methodology, the knowledge on measurement & evaluation, the knowledge on the education theory and on educational research, the knowledge on preparing the teaching material,
the knowledge on problem solving and the knowledge on teaching skill or the instruction technique and the interactive skill.

(2) Ethics development

Teachers should strict on ethics development i.e. study on etiquette, pursuance on the etiquette, encourage colleagues on the etiquette, create the physical/ mental/ emotion/ intellectual prosperity.

2.4 MEANING OF COMPETENCIES

The American Heritage Dictionary (2009)\textsuperscript{71} stated that competencies are what give a firm one or more competitive advantages, in creating and delivering value to its chosen field. Competencies are groups of skills, behaviour, or knowledge that are identified as performance standards for a particular job. Competencies are applied to a particular job rather than an individual employee. They are typically validated by employee who are performing the competency at least an acceptable level.

Wattana Piyawattanalai (2008)\textsuperscript{72} stated that competencies means a group of knowledge, skills, abilities, and performance which are needed for employee to applied to a particular work efficacy. Competencies divided into three types: (1) Core Competency, (2) Job competency, (3) Personal competency.

Chirawan Suntornbovorn (2008)\textsuperscript{73} stated that competencies means knowledge, skills, attributes, and performance which are needed for the job effectiveness.

Virgil E. Varvel Jr. (2007)\textsuperscript{74} stated that competency refer to appropriate knowledge, skills, attitudes, and abilities in a given context that adjust and develop with time and needs in order to effectively and efficiently accomplish a task and that are measured against a minimum standard. In the other words, a competent individual is one who effectively and efficiently accomplishes a task (instruct) in a given context using appropriate knowledge, skills, attitudes, and abilities that have adjusted and developed with time and needs.

From the meaning mentioned above, it can be said that Competencies referred to the personal knowledge, ability, skill, attitude, and performance for the professional advantage, to incur the development according to the required purposes.
2.5 TEACHERS' COMPETENCIES STANDARDS

Teacher competencies are quite broad for the generalist and many states base them on the INTASC Core Standard Competencies (Interstate New Teacher Assessment and Support Consortium) and the Council for Exceptional Children competencies.

It is stated that "Teachers today more fully recognize the value of inclusion because they see its power as an effective instructional practice. We feel that two factors are critical to the effectiveness of the district's inclusion efforts: effective collaborative on among classroom teachers and the special education staff, and a weekly block of instructional planning time." Logan, Diaz, Piperno, Rankin, MacFarland, & Bargamian. (1995)

The INTASC (2006) mentioned that there are 7 competencies do general teachers need to be competent inclusive teachers.

1. Ability to problem solves, to be able to informally assess the skills a student needs (rather than relying solely on standardized curriculum).
2. Ability to take advantage of children's individual interests and use their internal motivation for developing needed skills.
3. Ability to set high but alternative expectations that are suitable for the students; this means developing alternative assessments.
4. Ability to make appropriate expectations for each student, regardless of the student's capabilities. If teachers can do this, it allows all students to be included in a class and school.
5. Ability to determine how to modify assignments for students; how to design classroom activities with so many levels that all students have a part. This teaching skill can apply not just at the elementary or secondary level, but at the college level as well. It will mean more activity-based teaching rather than seat-based teaching.
6. Ability to learn how to value all kinds of skills that students bring to a class, not just the academic skills. In doing this, teachers will make it explicit that in their classrooms they value all skills, even if that is not a clear value of a whole school.
7. Ability to provide daily success for all students. Teachers have to work to counteract the message all students get when certain students are continually taken out of class for special work.

Other competencies that will help general education teachers in an inclusive environment include:

1. Realization that every child in the class is their responsibility. Teachers need to find out how to work with each child rather than assuming someone else will tell them how to educate a child.

2. Knowing a variety of instructional strategies and how to use them effectively. This includes the ability to adapt materials and rewrite objectives for a child's needs.

3. Working as a team with parents and special education teachers to learn what skills a child needs and to provide the best teaching approach.

4. Viewing each child in the class as an opportunity to become a better teacher rather than a problem to be coped with or have someone else fix.

5. Flexibility and a high tolerance for ambiguity.

Danielson, C. (2006) divided teachers' competencies into 4 domains:

**Domain 1: Planning and Preparation**
- a. Knowledge of Content & Pedagogy
- b. Knowledge of Students
- c. Selecting Instructional Goals
- d. Knowledge of Resources
- e. Designing Coherent Instruction
- f. Assessing Student Learning

**Domain 2: The Classroom Environment**
- a. Creating an Environment of Respect & Rapport
- b. Establishing a Culture for Learning
- c. Managing Classroom Procedures
- d. Managing Student Behavior
- e. Organizing Physical Space
Domain 3: Instruction
   a. Communicating Clearly & Accurately
   b. Using Question & Discussion Techniques
   c. Engaging Students in Learning
   d. Providing Feedback to Students
   e. Demonstrating Flexibility & Responsiveness
   f. Using Student Assessment Data

Domain 4: Professional Responsibilities
   a. Reflecting on Teaching
   b. Maintaining Accurate Records
   c. Communicating with Families
   d. Contributing to the School & District
   e. Growing & Developing Professionally
   f. Showing Professionalism

The American Federation of Teachers, the National Council Measurement in Education (2007) synthesis the competencies which associated with assisting teachers:

(1) Have a working level of competence in the Standards for Teacher Competence in Educational Assessment of Students. These standards are:
   a. Choosing assessment methods appropriate for instructional decisions.
   b. Developing assessment methods appropriate for instructional decisions.
   c. Administering, scoring, and interpreting the results of both externally produced and teacher-produced assessment methods.
   d. Using assessment results when making decisions about individual students, planning, teaching, developing curriculum, and school improvement.
   e. Developing valid pupil grading procedures that use student assessments.
   f. Communicating assessment results to students, parents, other lay audiences, and other educators.
   g. Recognizing unethical, illegal, and otherwise inappropriate
assessment methods and uses of assessment information.

(2) Know the appropriate and useful mechanics of constructing various assessments.

Locally built assessments are pervasive. Teachers construct daily, weekly, and term assessments for their classrooms. Administrators who have supervisory responsibility must be able to determine the quality of the assessment procedures their staff members use in masking decisions about students. The growing use of performance assessment, portfolio-based assessment, and computerized testing requires administrators to play a critical role in the proper development and use of these approaches.

Competencies associated with providing leadership in developing and implementing assessment policies.

3. Understand and be able to apply basic measurement principles to assessments conducted in school settings.

Administrators ought to be aware of how these principles apply to school settings so that in their supervisory roles they can support the proper use and interpretation of assessment results. They should understand the distinction between criterion-referenced and norm-referenced test interpretations, and should be able to judge the appropriateness of each kind of interpretation in specific decision contexts. They must understand the principle that validity inheres in the use or interpretation made of a test score, not in the score itself, and should be prepared to exercise leadership both in supporting appropriate uses and in discouraging inappropriate uses of assessment results.

(4) Understand the purposes (e.g., description, diagnosis, and placement) of different kinds of assessment (e.g., achievement, aptitude, and attitude) and the appropriate assessment strategies to obtain the assessment data needed for the intended purpose.

This standard extends Standards 1 and 2 in the Standards for Teacher Competence in Educational Assessment of Students, which focus only on making instruction decisions. Most assessment techniques are best used for a single purpose. Therefore, decisions should be based on assessment results consistent with the purpose for which the technique was constructed. Administrators have a responsibility to use assessment results appropriately in each decision context.
(5) Understand the need for clear and consistent building- and district-level policies on student assessment.

This extends Standard 5 in the Standards for Teacher Competence in Educational Assessment of Students, which focuses only on grading. School- and district-level policies should incorporate grading, final examinations, and other aspects of assessment. Administrators should work to ensure that teachers share a common understanding of the appropriate bases on which to assign marks and grades, and share common standards for the quality of work that merits a given grade. Similarly, administrators should provide opportunities for teachers and others to understand the proper means by which final examinations and other assessments are used in making decisions about students.

Competencies needed in using assessments in making decisions and in communicating assessment results.

(6) Understand and express technical assessment concepts and terminology to others in non-technical but correct ways.

Administrators should understand technical concepts in order to make decisions about what assessments to use or how to present assessment results to others. As administrators interpret assessment results to various audiences and stakeholders (e.g., teachers, other administrators, parents, school boards, the media), they need to be able to express technical concepts in non-technical but correct ways. Moreover, decisions such as selecting a standardized test or other assessment procedure often require reading manuals, technical reports, or other technical literature on assessment that use technical concepts.

(7) Understand and follow ethical and technical guidelines for assessment. Because assessment results may be used to make important and sometimes difficult-to-reverse decisions about individual pupils, school personnel, and educational programmes, interpretations of results must be valid and consistent with technically sound assessment principles and good educational practice. Administrators should be familiar with available guidelines and standards that describe how to develop, use, and report assessments properly.
(8) Reconcile conflicting assessment results appropriately.

Sometimes assessment results appear contradictory, and these apparent contradictions need to be resolved to make appropriate decisions. For example, results from a curriculum-based assessment may indicate strong performance in reading, yet scores from a standardized test in reading may be low; measures of school climate may indicate a positive perception of the school by the students, yet parental complaints about safety may be frequent. Administrators should be able to recognize apparent contradictions in assessment results in light of contextual factors and make appropriate interpretations.

(9) Recognize the importance, appropriateness, and complexity of interpreting assessment results in light of students' linguistic and cultural backgrounds and other out-of-school factors in light of making accommodations for individual differences, including disabilities, to help ensure the validity of assessment results for all students.

Assessment results may be influenced by a number of social, cultural, and other factors. These factors may or may not directly cause poor or good performance, but knowledge of these factors often helps in the interpretation of performance on assessment tasks. Administrators should be aware of the kinds of accommodations for administering assessments that may be appropriate in inappropriate for different students under different circumstances.

(10) Ensure the assessment and information technology are employed appropriately to conduct student assessment.

Technology includes computer-based assessment tools such as computerized-adaptive testing, computer-managed testing, computerized test item pools, computerized assessment records, and computerized databases. As technology becomes available to more and more schools, administrators will need to make decisions about the use of this technology to conduct student assessments and to store, organize, use, and safeguard the results obtained.

(11) Use available technology appropriately to integrate assessment results and other student data to facilitate students' learning, instruction, and performance.
Administrators should be able to organize a wide array of student assessment information with other student data and to make inferences about the quality of performance of students, their teachers, and school programmes. Administrators should recognize appropriate and inappropriate uses of assessment results in this context.

(12) Judge the quality of an assessment strategy or programme used for decision making within their jurisdiction.

Teachers' classroom assessments, school-based testing programmes, system-wide testing, and state assessment potentially have an impact on school operations. Administrators should be able to assist teachers and others to make informed judgments about assessment strategies. Administrators ought to be able to undertake or coordinate systematic investigations that correctly inform decisions about the quality of existing and proposed assessment programmes. The changing technology of assessment procedures makes this responsibility especially critical. For example, administrators should establish and monitor assessment procedures so that performance and portfolio assessments are undertaken in technically sound and educationally appropriate ways.

From the teachers' competencies mentioned above can be concluded as follow:

* Competencies associated with assisting teachers:

1. Have a working level of competence in the *Standards for Teacher Competence in Educational Assessment of Students*.

2. Know the appropriate and useful mechanics of constructing various assessments.

* Competencies associated with providing leadership in developing and implementing assessment policies:

3. Understand and be able to apply basic measurement principles to assessments conducted in school settings.

4. Understand the purposes (e.g., description, diagnosis, placement) of different kinds of assessment (e.g., achievement, aptitude, attitude) and the appropriate assessment strategies to obtain the assessment data needed for the intended purpose.
5. Understand the need for clear and consistent building- and district-level policies on student assessment.

Competencies needed in using assessments in making decisions and in communicating assessment results:

6. Understand and express technical assessment concepts and terminology to others in non-technical but correct ways.

7. Understand and follow ethical and technical guidelines for assessment.

8. Reconcile conflicting assessment results appropriately.

9. Recognize the importance, appropriateness, and complexity of interpreting assessment results in light of students' linguistic and cultural backgrounds and other out-of-school factors in light of making accommodations for individual differences, including disabilities, to help ensure the validity of assessment results for all students.

10. Ensure the assessment and information technology are employed appropriately to conduct student assessment.

11. Use available technology appropriately to integrate assessment results and other student data to facilitate students' learning, instruction, and performance.

12. Judge the quality of an assessment strategy or programme used for decision making within their jurisdiction.

Virgil E. Varvel Jr. (2007) stated that competencies can be divided into 7 types as follow:

1. **Administrative Roles (Systems, Ethical and Legal Issues)**

   The competent teacher has an understanding of and belief in the administrative system under which is employed.

   **Instructional Context:**
   
   (1) The exemplary teacher understands the context in which the institution and its teachers fall. The teacher is able to state principle aspects of the institutional mission and has a belief in that mission
   
   (2) The teacher understands that the school has an organizational structure.
   
   (3) The teacher understands that the school falls within a larger community, national, and global context.
Intellectual Property Issues and Regulations:
The competent teacher possesses a basic understanding of intellectual property issues in education.

(1) The competent teacher understands the material ownership within the programme.

(2) The competent teacher is copyright compliant with all materials (including student work) selection and use. No materials are used without proper copyright clearance. All resources utilized by the teacher within the course are properly cited.

(3) The exemplary teacher is able to answer basic student questions regarding intellectual property issues in the classroom. The teacher will be able to refer the student to the proper administrator when questions arise.

Student Issues and Management:
The competent teacher understands how to administer students within the programme including obtaining the student roster, academic honesty policies, grade reporting, student conduct, and issues with regards to students with disabilities.

(1) The competent teacher knows and applies proper rules for academic reporting and student privacy.

(2) The competent teacher is aware of and follows regulations regarding students with disabilities. The competent teacher knows applicable institutional, state, and federal rules and regulations for implementing programmes for individuals with disabilities. The competent teacher insures that the course is in compliance with regulations and other accessibility regulations proposed by the institution.

(3) The competent teacher has knowledge of honesty policies and procedures towards students and from where these polices can be accessed.

(4) The competent teacher has a willingness and ability to follow these academic honesty procedures.

(5) The competent teacher conducts student discipline under ethical constraints and within parameters set forth by the programme including procedures for removing students from a course when necessary.
Additional Legal and Ethical Issues:

The competent teacher has knowledge of various additional legal, privacy, and ethical issues in education and how they can impact the virtual classroom and its students. The competent teacher can list at least three examples of ethical issues such as those listed below with a description of each. The exemplary teacher can list more than three.

Teacher Selection and Evaluation:

The exemplary teacher understands how courses/teachers are selected and evaluated.

Support Mechanisms:

The exemplary teacher has an awareness of support mechanisms available to him/her.

2. Personal Roles (Personal Qualities and Characteristics)

The competent teacher possesses certain personal attributes that enhance his/her ability to instruct within any given educational paradigm.

Content Knowledge:

The competent teacher is qualified in the given field of study and demonstrates knowledge in the content area.

(1) The competent teacher can adequately address detailed, higher-order questions in the field of study and demonstrates a clear conceptual and systemic understanding of the course content.

(2) The competent teacher is continuously developing new knowledge of the pertinent content area. Such development may include being at least a peripheral member of the relevant community of practice.

(3) The competent teacher understands the relationships that exist between knowledge in a given domain and among different knowledge domains.

(4) The exemplary teacher has knowledge of a variety of appropriate Internet resources for the given topic beyond those used in the course itself.
Teaching Commitment:
The competent teacher shows a dedication to education and commitment to quality teaching.

(1) The competent teacher undergoes continual professional development in his/her teaching practice and lifelong learning.

(2) The exemplary teacher uses classroom experiences, evaluations, and research as sources for active reflection about and revision of teaching practice.

(3) The exemplary teacher has knowledge of resources available to aid in professional teaching development.

(4) The exemplary teacher is enthusiastic and excited about: Subject area content, Teaching and reaching students.

Communication Ability:
The competent teacher possesses an adequate typing ability or technological means to communicate through writing and/or audio to the students, peers, and community at large as permitted within the individual's state of disability, the resources provided by the institution, and within the requirements of the given curriculum and modality of effective instruction.

Time Management:
The competent teacher has lifestyle commitments that may include children, other employment, travel, hobbies, etc., but they do not interfere with his/her ability to instruct the course. The competent teacher has adequate time management skills.

Other Characteristics:

(1) The competent teacher is patient, showing perseverance and diligence in dealing with students, colleagues, technology, and instructional materials.

(2) The competent teacher is capable of relative objectivity.

(3) The exemplary teacher possesses first-hand experience as a student of class.

(4) The exemplary teacher pays attention to detail, limiting any errors in the course itself and dialogues within it.
The exemplary teacher shows flexibility: in dealing with students, in approach to education.

The exemplary teacher shows a tolerance for ambiguity.

The exemplary teacher accepts and endeavors to remove his/her own limitations.

The exemplary teacher understands that reflection is an integral part of professional growth.

The exemplary teacher has the ability to work at a computer for extended periods of time.

The exemplary teacher is caring, charismatic, compassionate, honest, authentic, non-judgmental, and an affective listener.

3. Technological Roles (Technology Knowledge and Abilities)

The competent teacher is knowledgeable about the technologies used in the virtual classroom and can make effective use of those technologies.

Access:

The competent teacher has access to the required technical equipment and software for the given medium and the course.

(1) The competent teacher owns or has easy access to necessary technical equipment and software including a computer, a reliable Internet connection, and other equipment such as video editing that might be required by the given course and content.

(2) The competent teacher has the necessary equipment and/or accommodations to overcome disability issues that might normally inhibit access to the necessary technical equipment.

Technical Proficiencies:

The competent teacher is knowledgeable and has the ability to use computer programmes that are typically required in education to improve learning/teaching, personal productivity, and information management.

(1) The competent teacher has an understanding of various commonly used Web browsing software i.e., The competent teacher can adequately perform various functions within Web browsing software, Browse and search the Web, Print from a browser,
Change settings such as security, font size, etc. within the browser. Troubleshoot typical issues that may arise with browsers. The exemplary teacher can search the Web for information using information sources beyond just a search engine but include information resources such as libraries and information repositories. The teacher can state the rationale for any search strategy. The exemplary teacher can help students to troubleshoot issues that may arise with browsers.

(2) The competent teacher has basic knowledge.

(3) The competent teacher is proficient in the chosen course management system. The competent teacher can modify content within the system as necessary. The competent teacher can manage all student activities. The competent teacher has clear abilities within the primary communication.

(4) The competent teacher has the ability to use word processing software including the ability to compose documents using accessibility software as required.

(5) The competent teacher has the ability to use and manage asynchronous and synchronous communication programmes as required by the course.

(6) The competent teacher has the ability to use and manage asynchronous communication programmes as required by the course.

(7) The competent teacher has knowledge of other computer programmes and hardware as required by the course being taught.

(8) The competent teacher can apply computer programme knowledge to improve student learning and increase personal productivity.

(9) The exemplary teacher continually develops knowledge and skills in technology, including current and emergent technologies.

(10) The exemplary teacher has an ability to multitask in a computerized environment.

**Technical Assistance:**
The competent teacher assists students with technology used in the course.

(1) The competent teacher has a strong enough understanding of the technology used and an ability to work with students such that s/he is able to help students with basic technical issues while referring more difficult issues to the technical support
person for that course or programme or appropriate technology tutorials and user's guides.

(2) The competent teacher can provide basic assistance in the use of technology to support the needs of learners with disabilities. These technologies include adaptive and assistive technologies.

(3) The exemplary teacher is a master of the technology used and can answer almost any question the students or other teachers may have about that technology.

(4) The exemplary teacher promotes healthy use of technology resources. For example, activities are not developed that would require a student to sit in front of a computer screen for 3 or more consecutive hours.

**Legal and Ethical Usage:**

The competent teacher teaches legal and ethical practices related to the use of technology and the environment.

4. **Instructional Design Roles (Instructional Design Processes, Knowledge, and Abilities)**

The competent teacher can judge the appropriateness and adequacy of materials and technology used in a course for the given audience, and make materials and technology adjustments due to shifting audience needs and abilities.

**Course Overview:**

The competent teacher presents a course overview to enhance student learning.

(1) The competent teacher maintains a valid and useful syllabus.

(2) The competent teacher makes use of valid and effective course objectives i.e. Course objectives are maintained as strong, appropriate, important, and relevant to the students, Course objectives are maintained within the curricular mandates of the programme.

**Resource Evaluation:**

The competent teacher understands how to evaluate learning materials (KI) and actively evaluates the materials used in a course.
(1) The competent teacher understands how and when to determine if adjustments to instructional materials of the course are necessary and can make such inferences based upon student performance, feedback, and other indicators as appropriate.

(2) The competent teacher reviews and evaluates the instructional effectiveness and value of the instructional materials of a course. The teacher makes use of student evaluations and other feedback within a course in order to improve selection of learning materials.

(3) The competent teacher is able to judge the credibility, clarity, validity, reliability, accuracy, currency, and quality of course resources in the given topic of study (KI) including an ability to state the rationale for such judgments.

**Resource Creation and Selection:**

The competent teacher selects materials and resources appropriate to the given context and that lead to effective learning outcomes.

(1) The competent teacher creates and selects learning materials and experiences appropriate for the curriculum, the students, and principles of effective instruction.

(2) The competent teacher maintains the currency, comprehensiveness, applicability, interaction level, and accuracy of materials used in the course.

(3) The competent teacher maintains a variety in resources that appeal to various learner demographics and skills.

(4) The exemplary teacher creates and selects learning materials and readings that demonstrate the interconnectedness of subject areas.

(5) The competent teacher can provide a rationale for any shift in content or materials. Any materials used are aligned with applicable standards, the needs of the students, and the given curriculum.

(6) The exemplary teacher utilizes materials in line with the mission of the institution and the objectives of the given programme. In other words, any changes to the content are made with this mission in mind.
Technology Selection:
The competent teacher selects technologies appropriate of the given context that lead to effective learning outcomes.

(1) The competent teacher utilizes a variety of technologies (such as simulations, multimedia, etc.) designed to reach course objectives and to promote skills relevant to the field of study.

(2) The competent teacher reviews and evaluates the instructional effectiveness and value of the technologies utilized in a course from teacher, student, and administrative perspective.

(3) The exemplary teacher can develop technology resources designed to reach course objectives.

Media Richness:
The exemplary teacher seeks appropriate media richness for the course and can state rationales for use of multimedia.

5. Pedagogical Roles (Teaching Processes, Knowledge, and Abilities)
The competent teacher must be well versed and capable in the instruction of a high quality and effective educational experience for all participants.

Education and Learning Theory:
The competent teacher has knowledge of the theory behind the educational paradigm employed in the course or by the department as a whole and for the student population being taught.

(1) The competent teacher has basic learning theory knowledge for the age group and ability level of students instructed and understands how said students construct knowledge and acquire skills.

(2) The competent teacher understands differences in approaches to learning including but not limited to multiple intelligences theory, learning styles, and performance modes.

(3) The competent teacher has an awareness of and understands the advantages and limitations within the classroom of numerous pedagogical.

(4) The competent teacher understands the cognitive processes associated with various kinds of learning and how these processes can be stimulated.
(5) The competent teacher understands how a student's physical, social, emotional, ethical, and cognitive development influences learning.

(6) The competent teacher understands that a student's socioeconomic, cultural, religious, and other dispositions can influence learning.

(7) The competent teacher understands the impact that cognitive, emotional, physical, and sensory disabilities can have on various communication processes in a virtual classroom.

(8) The exemplary teacher has an advanced understanding of various learning theories including behaviorism, constructivism, cognitive, group theory, etc.

Cognitive Presence:
The competent teacher not only knows the materials, but also creates a student awareness of that knowledge.

(1) The competent teacher contributes advanced knowledge and insights to class discussion. The teacher is able to integrate his/her knowledge into posts that occur within the general course discussion.

(2) The competent teacher contributes current resources from the field.

(3) The exemplary teacher can map knowledge to be acquired using a concept map or other technique as appropriate and needed.

Instructional Planning:
The competent teacher adequately plans for instruction.

(1) The competent teacher understands and makes use of appropriate learning theories and developmental theories when planning instruction.

(2) The competent teacher plans the use of numerous pedagogical approaches to achieve a given instructional purpose and to meet students' needs.

(3) The competent teacher incorporates knowledge of the content and current research when planning instruction.

(4) The competent teacher understands and considers disability impacts on learning when planning instruction.
Motivating Students:
The competent teacher understands the importance of learner motivation and is able to employ strategies to motivate students in the virtual classroom towards an appropriate learning set.

(1) The competent teacher understands factors that influence student motivation in classroom.

(2) The competent teacher acknowledges learner contributions both publicly and privately as appropriate.

(3) The competent teacher communicates persistently high expectations to the students.

(4) The competent teacher encourages students to incorporate their own goals into the course work and engage in practical inquiry. Personal experiences are linked to educational and career goals of students.

(5) The competent teacher finds additional appropriate means to encourage students to contribute.

(6) The competent teacher can judge the adequacy and appropriateness of a given motivational strategy and state a rationale for that judgment.

(7) The exemplary teacher sets short and long-term goals for the students consistent with the curricular goals of the course and programme.

(8) The exemplary teacher will make students aware of how to be successful in the environment and the given course.

Communications Usage:
The competent teacher has a clear ability to make effective, educational uses of communication methods.

(1) The competent teacher understands the importance of language in learning.

(2) The competent teacher understands how the type of media used, from text to audio/video, can influence communication.

(3) The competent teacher understands how cultural, gender, and other demographic distinctions can affect communications and learning.
(4) The competent teacher appropriately creates, maintains, and organizes communications in the course to provide for effective teaching and learning.

(5) The competent teacher makes use of a variety of communication means dependent upon the student and course needs.

(6) The competent teacher models active, effective, and engaging communication. The teacher uses a transactional not transmissive mode of communication.

(7) The competent teacher has the ability to carry on an internal dialogue in order to formulate effective responses and statements within the course dialogue.

(8) The competent teacher is emotive in the communicative mode(s) used in the given course through appropriate use of computer mediated communication paralanguage.

(9) The competent teacher posts items that reflect upon student posts and ideas.

(10) The competent teacher provides varied opportunities for the students to demonstrate effective communication skills.

(11) The competent teacher can judge the effectiveness of the communications taking place (KI) and can state a rationale for that judgment.

Materials Presentation:

The competent teacher effectively presents information to the students in a manner that aids in interpretation, understanding, and internalization of new information by the students.

(1) The competent teacher introduces materials in logical progression at increasingly complex levels in a manner meaningful to students at varying levels of development and with diverse learning needs.

(2) The competent teacher presents information appropriately chunked with units presented in a logical progression within a well organized design.

(3) The competent teacher presents information in an unambiguous and clear manner.

(4) The competent teacher presents course content in a manner of personal relevance to the students. The competent teacher links inquiry to genuine problems or issues of interest to the learners.
(5) The competent teacher presents diverse experiences and counter-experiences and multiple representations of the subject matter including diverse applications of that subject matter.

**Instructional Processes:**

The competent teacher effectively presents information to the students. The competent teacher can effectively educate and guide the students toward new cognitive structures and meaningful educational outcomes using proven techniques and personal skill.

(1) The competent teacher guides students to knowledge acquisition.

(2) The competent teacher is able to vary his/her role among teacher, facilitator, coach, collaborator, co-participant, and observer as necessary for the given content and educational needs.

(3) The competent teacher incorporates active learning into the classroom.

(4) The competent teacher effectively utilizes student-centered, discussion-oriented pedagogy.

(5) The competent teacher uses questioning effectively.

(6) The competent teacher encourages metacognition within students and actively assists linking of new ideas and concepts to already existing ones. The competent teacher elicits critical and active reflection from the learners about what they are learning and how it is applied in their own practice. The competent teacher guides students towards understanding and recognition of their own and others' inferences for validity, timeliness, reliability, and quality. The competent teacher connects and facilitates the self-connection of student's learning experiences to other content areas and to the student's life as a whole.

(7) The competent teacher demonstrates and expects higher-order, critical thinking and problem solving. Such skills are developed among the students.

(8) The competent teacher encourages students to consider alternative explanations of their own experiences. Multiple viewpoints are allowed when appropriate.

(9) The competent teacher understands how a student's conceptions and misconceptions influence learning. The competent teacher has knowledge of common misconceptions in the field of study. The competent teacher determines student
misconceptions and adapts instruction to enforce proper conceptualization or re-conceptualization by the students.

(10) The competent teacher maintains appropriate pacing of course progression. The competent teacher provides students time to explore and develop required inquiry, skills, knowledge, etc. The competent teacher provides appropriate time for assignment and readings completion. Activities are balanced to help students manage time and load. The competent teacher presents a timeline or calendar with explicit key points towards successful completion of the course.

(11) The competent teacher demonstrates immediacy and timeliness.

(12) The competent teacher engages students in generating and testing knowledge according to the process of inquiry and standards of evidence of the given context.

(13) The competent teacher facilitates the use of learning technologies such as multimedia, simulations, etc. to aid students in reaching course objective.

(14) The competent teacher can state a rationale for the given choice of pedagogical approach.

(15) The exemplary teacher helps students organize and manage their time.

(16) The exemplary teacher uses innovative approaches to knowledge development in students and can state rationales for the use of such approaches.

(17) The exemplary teacher allows student criticism or questioning of teacher's views as appropriate yet maintains a clear position of authority.

(18) The exemplary teacher understands how his/her personal biases may affect instruction.

(19) The exemplary teacher displays creativity in the manner in which the course is presented to the students.

(20) The exemplary teacher will encourage and expect creativity among the students.

(21) The exemplary teacher strives to utilize approaches that are interdisciplinary and integrate multiple content areas into instruction.

(22) The exemplary teacher's teaching practice is in line with philosophical models in place at the institution. In other words, not only does the teacher have knowledge
of the principles, but the teacher carries out that belief in his/her observable practice through items listed in competency mentioned above.

(23) The exemplary teacher strives to maintain an aesthetic appeal to the course while providing for accessibility and usability.

**Tailored Instruction:**

The competent teacher individually tailors instruction to meet student needs.

(1) The competent teacher respects diverse ways of learning.

(2) The competent teacher knows and uses a wide range of activities, information, and technologies that are age and cognitive level appropriate to the audience and appeal to diverse student needs to enhance student learning.

(3) The competent teacher knows techniques for modifying content for those with disabilities and/or diverse learning/capabilities and styles.

(4) The competent teacher addresses the diverse needs of the students including but not limited to cultural needs, economic needs, and students with disabilities. The competent teacher designs learning experiences and utilizes adaptive devices/technologies that enable students with diverse backgrounds and abilities to experience the content. The competent teacher will facilitate equitable and effective access to technology resources required by the given course for all students with attention to diverse backgrounds, cultures, and abilities. The exemplary teacher understands the importance of cultural diversity and makes an attempt to learn about and incorporate this understanding into instruction. The exemplary teacher supports, through specific strategies, the acquisition of knowledge by students whose first language is not English.

(5) The exemplary teacher individually tailors instruction to the students when possible and appropriate.

(6) The exemplary teacher will provide more than one path as appropriate to complete course objectives.

**Collaboration:**

The competent teacher implements effective group and collaborative/cooperative learning.

(1) The competent teacher understands the dynamics of cooperative and group work.
(2) The competent teacher develops and utilizes collaborative activities and group work as appropriate to meet the needs of the given content and audience. The competent teacher uses a range of member roles in collaborative exercises. The competent teacher keeps groups at an appropriate size. The competent teacher assigns group tasks that result in a product that the students can use. The competent teacher keeps group discussions focused on task as appropriate.

(3) The competent teacher promotes effective leadership within groups.

**Student Monitoring:**

The competent teacher monitors student activity to help manage student success.

(1) The competent teacher can analyze individual and group performance in order to continually redesign the learning experience to meet the students' needs.

(2) The competent teacher identifies differences in approaches to learning such as multiple intelligences in students.

(3) The competent teacher is able to determine if and when a student is struggling.

(4) The competent teacher assists students having difficulties at the appropriate time and through the appropriate method.

(5) The competent teacher can state a rationale for such judgments in 1-4 above.

(6) The exemplary teacher is able to use appropriate technologies to assist in student monitoring.

**Evaluation:**

The competent teacher evaluates the effectiveness of instruction.

(1) The competent teacher makes use of assessment results, course evaluations, and personal reflections to insure that technology is appropriately applied by both the teacher and the students for the given context leading to student learning or other needs such as effective communications.

(2) The competent teacher makes use of student evaluations, assessment results, personal reflections, and other feedback within a course in order to improve practice and maximize student learning.
6. Assessment Roles (Assessing Student Learning and Abilities)

The competent teacher is aware of assessment issues and can effectively assess students using a variety of techniques in the classroom designed not just to determine student progress but to aid in student learning.

Assessment Purpose:
The competent teacher understands the purposes of assessment in terms of student learning and evaluation.

Assessment Challenges:
The competent teacher understands that assessments can provide unique difficulties to students such as wondering how, where, and in what form to submit assignments, difficulty understanding instructions without immediate ability to ask for and receive assistance, wondering where the student stands in regards to successful course completion, difficulty managing time, difficulty performing activities due to disability or language difficulties.

Assessment Design:
The competent teacher understands how to select, construct, and utilize a rational assessment strategy or instrument for a given context.

(1) The competent teacher respects diverse ways of applying knowledge.

(2) The competent teacher understands the purpose and effectiveness of various assessment methods in different contexts.

(3) The competent teacher appropriately makes use of a variety of assessment methods that appeal to a variety of learner preferences, abilities, intelligences, etc.

(4) The competent teacher makes use of assessments that directly address the course objectives.

(5) The competent teacher will provide assessments that challenge the students.

(6) The competent teacher will build participation into assessments and course grading.

(7) The competent teacher can state a rationale for assessment choice.
(8) The exemplary teacher provides for a choice of assignment by the students when appropriate.

(9) The exemplary teacher provides a pre-assessment of student knowledge. Pre-assessment may be used to: (a) Assist in instructional methods, organization, and level. (b) Function as an ice-breaking activity when properly constructed. (c) Determine growth during the course.

Assessment Delivery:

The competent teacher effectively presents assessments to the students.

(1) The competent teacher provides clear objectives and purposes to all assignments.

(2) The competent teacher provides very thorough explanations of all assignments including both how to complete the assignment and where/how to submit the completed work.

(3) The competent teacher provides adequate time for learners to state questions, make comments, and display concern about assessment procedures and activities.

(4) The competent teacher provides adequate time for effective completion of the assignments for the given student audience and ability levels.

(5) The competent teacher can make appropriate and legal provisions for the adequate assessment of students with special needs or disabilities.

(6) The exemplary teacher provides sample assignments when appropriate and possible.

(7) The exemplary teacher reminds students of important assignment deadlines.

Grading:

The competent teacher uses appropriate scoring rubrics and grading.

(1) The competent teacher can provide a clear pedagogical rational for grading method and/or rubric use and included criteria.

(2) The competent teacher provides students with a clear delineation of how or if assignments will be or have been graded.

(3) The competent teacher is not subject to grade inflation issues.
(4) The competent teacher can judge the effectiveness, adequacy, reliability, and any bias in questions and activities used.

*Feedback:*

The competent teacher understands the importance of and provides for student feedback.

(1) The competent teacher maintains continual feedback throughout the course.

(2) The competent teacher quickly acknowledges receipt of assignments when not built into the course management system.

(3) The competent teacher provides a prompt turnaround time when grading or marking-up assessments.

(4) The competent teacher bases clear and concise feedback on clear rationales.

(5) The competent teacher provides constructive and supportive feedback and critiques with suggestions for improvement when appropriate. Achievements, errors, and the causes of errors are identified.

(6) The competent teacher communicates course achievement with the students in general terms and in terms of progress towards stated objectives.

(7) The competent teacher focuses feedback on specifics when possible.

(8) The competent teacher uses multidimensional feedback – covers content, presentation, attitude, grammar, etc.

(9) The competent teacher can judge the adequacy of feedback for a given student and present a rationale for that judgment.

(10) The competent teacher maintains an up-to-date grade book or portfolio of student work.

*Technology Use:*

The competent teacher can make use of appropriate technologies to assist in conducting assessments and interpreting results.
Academic Honesty:
The competent teacher is aware of and takes account of academic honesty issues in the virtual classroom.

(1) The competent teacher understands the issues involved with academic honesty in the learning environment.

(2) The competent teacher has knowledge of methods for reducing the probability and possibility of cheating in the virtual classroom.

(3) The competent teacher implements strategies to reduce academic honesty in the classroom.

Self Assessment:
The exemplary teacher actively engages students in self-assessment and skill practicing activities to encourage them to become personally involved in monitoring their own learning and setting personal goals for achievement.

Theory:
The exemplary teacher has a deep understanding of measurement theory and statistics.

7. Social Processes and Presence (Social Roles)
The competent teacher recognizes that a social aspect to education exists. The teacher will effectively incorporate that aspect into the teaching and learning process with the intent of creating a learning community.

Social Presence:
The competent teacher maintains an social presence.

(1) The competent teacher models open and honest communication with students. Methods of such modeling may include: (a) Teacher creates a sense of approachability. (b) The teacher takes the initiative in sharing with the group. (C). Teacher-student interaction is encouraged.

(2) The competent teacher provides affective as well as effective responses. The teacher shows an ability to convey compassion, humanity, patience, and emotion at a distance.

(3) The competent teacher is visibly available for the students. The competent teacher has an appropriate activity for which students are made aware.
(4) The competent teacher properly treats the students. Aspects of such treatment include but are not limited to: (a) Demonstrating positive regard for all students. (b) Not purposefully coercing, berating, humiliating, or demeaning students.

**Community of Learners:**

The competent teacher creates an appropriate environment for learning that encompasses elements beyond just the virtual classroom design itself.

(1) The competent teacher recognizes the importance of creating an effective learning environment in the virtual classroom.

(2) The competent teacher understands collaborative processes and possesses the skills necessary to carry them out.

(3) The competent teacher understands how individuals influence groups.

(4) The competent teacher has an understanding of how to effectively create a community of learners in classroom, promoting positive behavior and learning among diverse students.

(5) The competent teacher facilitates a community in which individual differences are respected.

(6) The competent teacher involves learners immediately in the development of the course atmosphere including ice-breaking activities. Providing time will increase the community and student ownership of that community and the subsequent learning. (a) A competent teacher provides time for students to acclimate to the course. (b) A competent teacher is able to judge and provide a rationale for determining when that time has been met. (c) The exemplary teacher provides a space for students to enter information about themselves.

(7) The competent teacher clearly presents norms, performance guidelines, expectations, and code of conduct to the group or negotiates these items through a collaborative process.

(8) The competent teacher understands, applies, and promotes interactivity among students and between students and teacher. Such is required for synergistic relationships helpful to student satisfaction and learning. (a) The competent teacher understands how important continual, effective communication is between the teacher and the students, as well as among the students to the development and maintenance of a
community of learners in course. (b) The competent teacher provides clearly defined purposes for interactivity in the course. (c) The competent teacher provides clear expectations of interactivity. Posting requirements are clearly provided for each activity and for the course as a whole. (d) The competent teacher models, coaches, and instructs on appropriate and expected behaviors and posting requirements. The teacher shows active and interactive involvement. (e) The competent teacher builds interactivity elements into the course assignments. (f) The competent teacher can state the rationales for interactivity elements being employed in the course. (g) The competent teacher possesses adequate patience in order for students to develop their own threads of communication. The competent teacher does not dominate discussions through the wording or mannerisms exposed during communications. (h) The exemplary teacher will find ways to encourage and foster sharing by and from the students. (i) The competent teacher will provide a content free zone for off topic discussions.

(9) The competent teacher continuously judges the climate of the course to determine if successful performance is being encouraged. The teacher can state a rationale for such judgments.

**Cultural Competency:**

The competent teacher understands that cultural differences among students will affect the manner in which those students are willing and able to participate in a community.

**Conflict Management:**

The competent teacher understands and is capable at managing conflict in the virtual classroom.

(1) The competent teacher understands that communications can be misconstrued.

(2) The competent teacher understands that there is a tendency that personalities can be more volatile than face-to-face personalities.

(3) The competent teacher maintains an environment free from intimidation and otherwise in proper decorum.

(4) The competent teacher swiftly recognizes conflict.
(5) The competent teacher has knowledge of procedures for handling student conflict in forum and is capable of conducting such procedures.

(6) The competent teacher follows up conflict resolution with students involved.

(7) The competent teacher can gauge the appropriateness and state the rationale for any procedure undertaking to subdue student conflict.

Socializing Agent:
The competent teacher understands the social nature of the classroom and how it can contribute to the success of the students. The exemplary teacher is both a knowledge builder and social agent among the students.

Community of Practice:
The competent teacher understands the collaborative processes involved in instruction and works with other members of various communities to further educational goals.

(1) The competent teacher understands the need to collaborate with other professionals in education when possible and appropriate.

(2) The exemplary teacher demonstrates the willingness and ability to co-teach or co-plan instruction when applicable. The competent teacher is flexible when working with colleagues.

(3) The exemplary teacher communicates and collaborates with the larger academic and social communities of relevance to enhance student learning and personal growth.

(4) The exemplary teacher has a presence within the education community of practice and understands the importance of such participation.

From the studies mentioned above, it can be concluded that the teachers' competencies referred to the knowledge, ability, skill, attitude, and behavior of teachers, that is advantageous to the profession, incurring the development of students in every aspect according to the required purposes.

In the present study, the teachers' competencies standards referred to the teachers with a permanent work to earn the living through the teaching or supporting the learning of others in the government or private institutes, with the consciousness, the knowledge, and
the skill in the educating under the regulation stipulated by the Secretariat of Teachers' council of Thailand, A.D. 2005 which divided into nine standards as follow:

Standard 1: Language and Technology
Standard 2: The knowledge on the Curriculum Development
Standard 3: Pedagogy
Standard 4: Teacher Psychology
Standard 5: Education Evaluation and Measurement
Standard 6: Education Institute Management
Standard 7: Education research
Standard 8: Education Innovation and Information Technology
Standard 9: Pedagogue

The details of Teachers' competency standards are as follow:

Standard 1 : Language and Technology for Teachers

Centre for Educator Development (2007)\(^{80}\) described what students should know and be able to do as they progress in their study of languages. The student should be communicated in a language using the skills of listening, speaking, reading, and writing. In order to implement, the teachers should have a thorough familiarity with and an understanding of their knowledge and skills:

1. The teacher knows the language

The teachers of modern languages have to practice to be a good practitioner, can use the language for instruction at the advanced proficiency level in Speaking, to be a better practitioner, can use the language for instruction at the advanced-high proficiency level in speaking, and to be an exemplary practitioner, can use the language for instruction at the Superior proficiency level in speaking. The teacher of classical languages must be able to demonstrate comprehension of authentic texts (prose and poetry) of various authors through instruction, to use the skills of listening, speaking, and writing in instruction to reinforce the skill of reading in students, conducts class in the language at an appropriate level for all students, to use the language to the maximum extent possible, providing comprehensible input & strategies to facilitate comprehension, to use knowledge of the subsystems of the language, such as syntax (including grammar), lexicon,
and phonology, to develop communication skills in students, and to demonstrate
knowledge of dialectal and sociolinguistic variations.

2. The teacher understands language pedagogy as it relates to the teaching
of the student standards.

The teachers have to maintain a clear focus on communication as the
primary goal of language learning by: (1) using experiences and activities to develop
students' interpersonal communication skills, i.e., direct oral or written communication
between individuals who come into interactive contact; (2) using experiences and activities
to develop students' interpretive communication skills, i.e., the receptive communication
skills of listening, reading, and viewing; (3) using experiences and activities to develop
student's presentational communication skills, i.e., one-way communication for an audience
of listeners, readers, or viewers. The teachers have to implement the concept of a balanced
curriculum that integrates the skills of listening, speaking, reading, writing, viewing, and
showing with a knowledge of culture. They have to facilitate and emphasize meaningful
communication through: maximal student participation; diagnostic use of students' linguistic errors; learning of grammar in a communicative approach; activities that provide a
real-world context.

The teachers have to adapt the classroom to students' needs by: using
knowledge of learning and communication strategies, selecting, adapting, and creating
materials and activities to support students' progress through Novice, Intermediate, and
advanced checkpoints, applies current research related to language learning pedagogy,
presents a clear rationale for pedagogical choices that address students' differences,
diversity, and special needs, assesses in an ongoing manner students' progress in their
interpersonal, interpretive, and presentational communication skills.

3. The teacher has a thorough understanding of the culture associated with
the language and knows about the connections among the practices, products, and
perspectives of the culture.

The teacher have to portray the culture(s) accurately by: using culturally
appropriate materials (visuals, oral and written texts); embedding appropriate cultural
contexts into language instruction; conducting activities (discussions, role plays,
presentations) that prompt an understanding of the culture(s) and of the impact this
knowledge can have on the way students interact with members of another culture. The
teachers have to apply knowledge of the culture(s) being studied to help students recognize
how the practices (patterns of behavior) and products (tangible and intangible things
people create) reflect the perspectives (attitudes and values) of the culture(s).

4. The teacher understands the relationship between the practices and
the perspectives of the culture(s) being studied as it concerns, for example: family life,
social interactions, leisure pursuits, involvement with work, religion or beliefs, societal
hierarchies.

The teachers have to integrate concepts of cultural practices into
language instruction (e.g., everyday patterns of behavior that represent the knowledge of
"what to do when and where" in the culture(s), to promote an understanding of cultural
practices and of the relationship between cultural practices and perspectives through
activities in which students: (1) obtain information from visuals, oral and written texts;
(2) participate in age-appropriate cultural activities (games, songs, storytelling,
dramatizations); (3) use appropriate verbal and non-verbal behavior in common classroom
interactions and in daily activities among peers and adults. The teachers have to encourage
students to make observations and analyze the relationship between cultural practices and
perspectives through activities in which students: (1) identify and describe cultural practices
as experienced in a dramatization or as viewed in a videotape; (2) form hypothesis about
how practices relate to cultural perspectives; (3) find information about how practices
reveal perspectives (interviews, reading, etc.)

5. The teacher understands the relationship between the products and the
perspectives of the culture(s) as it concerns, for example: products used in daily life
(e.g., culinary items, religious artifacts, clothing), works of art (e.g., literature, the visual
arts and architecture, drama, music, film), non-artistic institutions (e.g., government, systems
of transportation, use of technology, systems of education, legal practices)

The teachers have to integrate concepts of cultural products into
language instruction (e.g., tangible and intangible things people create such as a painting,
a pair of chopsticks, a dance, a system of education). They have to promote an
understanding of cultural products and of the relationship between cultural products and
perspectives through activities in which students: (1) identify tangible products of the culture(s) such as foods, toys, dress, types of dwellings; (2) explore ways in which cultural products are required or justified by the underlying beliefs and values of the culture(s). The teachers have to prepare students to make observations and analyze the relationship between cultural products and perspectives through activities in which students: (1) experience or read about expressive products of the culture(s) such as songs, selections from literature, and types of artwork; (2) investigate the function of utilitarian products of the culture(s) (household items, clothing); (3) find information about how products reveal perspectives (interviews, readings, etc.).

6. The teacher understands the pedagogy of teaching culture as it relates to the essential knowledge and skills.

The teachers have to embed authentic culture in communication by using culture as lesson content and designing lessons around cultural themes/ perspectives, to use appropriate cultural behavior in the classroom (e.g., gestures, greetings), to use a variety of media to promote an understanding of cultural products, practices, and perspectives. The teachers have to provide opportunities for students to experience, analyze, and create cultural practices and products (age-appropriate games, songs, literature, art, dramatizations, etc.). They have to design meaningful learning experiences whereby students discover, observe, and analyze the connections among cultural practices, products, and perspectives through activities such as role plays, games, artifact study, group discussions, presentations, and projects and to use assessment activities that provide evidence of students' knowledge of culture(s), including how that knowledge can have an impact on the way they interact with members of another culture.

7. The teacher understands the connections between languages and other disciplines.

The teachers have to connect the study of languages to other subject areas for content, curriculum resources, and motivation, to draw upon colleagues from other disciplines for support and collaboration to design activities that reinforce and expand knowledge among disciplines, to create learning experiences and activities that allow students to integrate language knowledge and skills with other subject areas. They have to
support curriculum connections to other disciplines by using relevant materials in the language and incorporating content that helps students increase their communicative competency to include academic language, to provide opportunities within the language discipline for students to use the language in another subject area (e.g., to research a topic), and to help to develop students' higher order thinking skills by designing learning experiences that encourage students to think in and use the language in conjunction with content from other disciplines.

8. The teacher understands formal interdisciplinary programme

The teachers have to investigate ways of connecting with and supplementing the curricula of other disciplines by becoming familiar with the knowledge base of those disciplines, to use curricular themes and resources that can be transferred from other disciplines into the language classroom, to use the content of other disciplines in a natural, constant, and ongoing fashion as part of the language curriculum and to create connections by planning and teaching with teachers in other disciplines.

9. The teacher knows strategies for teaching content through the medium of the language.

The teachers have to ensure student comprehension and expand student language production through the use of speech that focuses on meaning while incorporating visuals, manipulative, and role-play, to sequence instruction to proceed from the concrete to the abstract to ensure student success with all content, to ensure student mastery of language required for the content and promotes learning of language compatible with the content, and to use assessment activities that provide evidence of students' ability to use the language to explore other disciplines.

10. The teacher knows how to compare and contrast the features of languages (e.g., syntax, lexicon, phonology, non-verbal communication, etc.)

The teachers have to facilitate students' comparisons and contrasts of linguistic features of the language studied with their own by, for example: exploring how languages use word order, inflection, and other linguistic features to signal meaning; providing opportunities to observe and use formal and informal language; developing an understanding of cognates and idioms; helping students discover the role of connotation in
understanding the meaning of words. They have to guide students to compare and contrast the usage and meaning of non-verbal communication (e.g., gestures) in the language studied on their own and to utilize student errors (e.g., first language interference, over-generalizations) to direct and/or inform learning.

11. The teacher understands the similarities and differences between the target culture(s) and how the language and the target culture(s) affected by other language and cultures.

The teachers have to foster awareness of the cultural connotations of Vocabulary, to analyze with students various features of the language to link them to the practices, products, and perspectives of their respective cultures, to facilitate student comparisons and analyses of cultural perspectives as seen through the practices of the Cultures, to facilitate student comparisons and analyses of cultural perspectives as seen through products of the cultures, to use assessment activities that provide evidence of students' ability to compare linguistic features of the language being studied and their own, as well as the practices, products, and perspectives of the culture(s) being studied and their own. The teachers have to increase student awareness of the interrelationships between and among languages and cultures, to guide students to trace the interaction between languages and cultures, to facilitate independent research on the interaction between languages and cultures.

12. The teacher understands the universality of stereotyping and is familiar with the stereotypes associated with the culture(s) being studied.

The teachers have to introduce students to character traits of the culture(s) and contrasts them with stereotypes, to compare a culture's self-view with another's stereotype of that culture(s), to discuss the possible origins of specific stereotypes that cultures have about one another, to create and shares activities which enhance knowledge of the culture(s) and reduce stereotyping.

13. The teacher knows ways to access and use the language and its cultural resources beyond the school setting.

The teachers have to inform students about and guides independent participation in opportunities to use the language outside the classroom (e.g., through contests, research projects, events of ethnic organizations, or opportunities abroad:
travel, study, or work). They have to incorporate into lessons guest speakers, real-world materials reflective of the language and culture, and information on using the language outside the classroom, to use classroom and extra-classroom learning experiences and activities to practice using the language and culture in real-world situations, to create opportunities to use the language beyond the school setting (e.g., through service projects, student exchanges, or school sponsored cultural events), and to integrate technology (e.g., the Internet) into the curriculum to enable students to use the language in real-world contexts by connecting students to language users in other parts of the world.

14. The teacher knows how to use the language for lifelong learning, personal enrichment, and career development.

The teachers have to motivate students to independently pursue personal enrichment activities using the language (e.g., travel, research, reading, networking), to provide experiences and implements learning activities where language skills are used for personal enrichment (e.g., participation in social, civic, and vocational events). They have to help students discover how the language and culture can be used in various careers and show students where and how they may access this information (e.g., uses career situations and business literature/forms in classroom activities), to assist students in finding applications for the language in job settings (e.g., internship programmes), to bring local and area resources and resource persons into the classroom to advise and interest students in career applications for language, and to encourage students to see themselves as world citizens and helps them understand that language proficiency is an asset that will help them function successfully in the world community.

It can be concluded that the teachers' competencies regarding the standard of language and technology are as follow:

(1) The ability to apply the correct Thai language in the communication, with regard to the skill in listening, speaking and writing.

(2) The ability to apply the skill in the English language or other languages, with regard to the listening, speaking and writing, for the correct communication.

(3) The ability to use the basic computer.
Standard 2: The Knowledge on the Curriculum Development

All "curricula" are being re-developed with a constructivist approach starting from primary school level with the aim of raising creative, flexible, intellectually inquisitive, innovative students suitable for team work in line with General Objectives and Basic Principles of Thai National Education. The most primary responsibility rests on our teachers in effective and efficient implementation of curricula developed with a constructivist and "Student Centred" approach focusing on "Learning to Learn".

Teachers are expected to have sufficient subject-specific knowledge, to convey this knowledge to their students through a constructivist approach in line with the new programme, to have skills for collaboration with colleagues and communication with students together with administrative and organizational skills, and to efficiently exchange information with all concerned stakeholders, especially with families. As may be seen, professional activities of our teachers cover a broad area. Within this context, it is not possible for our teachers to fulfill their obligations without identifying "professional competencies". Amazing recent developments in science and technology also affect the dynamic structure in all dimensions of teaching and learning. Thus, it is inevitable to question and try to improve qualities of our teachers who play a major role within this process.

The policy goal of the knowledge deepening approach is to increase the ability of students, citizens, and the workforce to add value to society and the economy by applying the knowledge of school subjects to solve complex, high priority problems encountered in real world situations of work, society and life. Such problems might relate to the environment, food security, health, and conflict resolution. With this approach, teachers should understand the policy goals and social priorities and identify, design, and use specific classroom activities that address these goals and priorities. This approach often requires changes in the curriculum that emphasize depth of understanding over coverage of content and assessments that emphasize the application of understanding to real-world problems. Assessment change focuses on complex problem solving and incorporating assessments into the ongoing activities of the class. Classroom pedagogy associated with this approach includes collaborative problem- and project-based learning in which students explore a subject deeply and bring their knowledge to bear on complex, every-day
questions, issues, and problems. Teaching is student-centered in this approach and the teacher's role is to structure problem tasks, guide student understanding, and support student collaborative projects. In this role, teachers help students create, implement, and monitor project plans and solutions. With this approach, classroom structure is also different. Class periods and classroom structure are more dynamic, with students working in groups for extended periods of time. In guiding students' understanding of key concepts, teachers will employ open-ended technology tools that are specific to their subject.

Teacher competencies related to the knowledge deepening approach include the ability to manage information, structure problem tasks, and integrate open-ended software tools and subject-specific applications with student-centered teaching methods and collaborative projects in support of students' deep understanding of key concepts and their application to solve complex, real-world problems. To support their collaborative projects, teachers would use network resources to help students collaborate, access information, and communicate with external experts to analyze and solve their selected problems. Teachers should also be able to create and monitor individual and group student project plans, as well as access experts and collaborate with other teachers making use of networks to access information, colleagues, and other experts in supporting their own professional development. (UNESCO: 2007)

It can be concluded that the teachers' competencies regarding the standard of knowledge on the curriculum development are as follow:

(1) The ability in the curriculum analysis.
(2) The ability in improving and development the curriculum with diversity.
(3) The ability to evaluate the curriculum before and after the application of the curriculum.
(4) The ability to devise an effective curriculum.

Standard 3 : Pedagogy

The policy goal of the knowledge creation approach is to increase productivity by creating students, citizens, and a workforce that is continually engaged in and benefits from knowledge creation and innovation and life-long learning. Teachers, in this approach,
should not only be able to design classroom activities that advance these policy goals but participate in the development of programmes within their school that advance these goals. With this approach the curriculum goes beyond a focus on pedagogy that are needed to create new knowledge. Skills such as problem solving, communication, collaboration, experimentation, critical thinking, and creative expression become curricular goals in themselves and these are the objects of new assessment methods. Perhaps the most significant goal is for students to be able to determine their own learning goals and plans—the ability to establish what they already know, assess their strengths and weaknesses, design a learning plan, stay on task, track their own progress, and build on successes and adjust to failures; skills that can be used throughout a lifetime to participate in a learning society. Assessment is itself a part of this process—the ability for students to assess the quality of their own and each others’ products. The role for teachers in pedagogy is to overtly model these processes, structure situations in which students apply these skills, and assist students in their acquisition. Teachers build a learning community in the classroom in which students are continuously engaged in building their own and each others’ learning skills. Indeed, schools are transformed into learning organizations in which all actors are involved in the learning process. From this perspective, teachers are themselves master learners and knowledge producers who are constantly engaged in educational experimentation and innovation in collaboration with their colleagues and outside experts to produce new knowledge about learning and teaching practice. A variety of networked devices, digital resources, and electronic environments are to create and support this community in its production of knowledge and anytime, anywhere collaborative learning. (UNESCO: 2007)

It can be concluded that the teachers’ competencies regarding the standard of knowledge on the curriculum development are as follow:

1. The ability to assemble each subject for the use in the learning plans of each semester and throughout the semester.
2. The ability to devise the learning to suit the age of learners.
3. The ability to construct the media, to improve the media, and to select the media in the learning support for learners.
(4) The ability to prepare and support the learning of learners, with the discrimination of their learning levels from the evaluation.

Standard 4: Teacher Psychology

Educational psychology has been in many different ways. One such definition offered by American Psychological Association (2009) describes it as application of psychology to education by focusing on the development, evaluation application of theory and principle of learning and instruction that can enhance lifelong learning. Educational psychology, in its various aspects, has contributed principles, methods of thought, and specific procedures for the process of education. Many contemporary procedures in American teaching stem from the findings of twentieth century psychologists. Educational psychology affords teachers a means of developing understanding for educational problems, and outlines ways in which the educational function can be carried out. The following are the teachers' competencies regarding the educational psychology.

(1) The ability to understand the nature of learners.

(2) The ability to assist learners in their learning, and to develop to their full capacity

(3) The ability to advise and assist learners to acquire a better quality of life.

(4) The ability to promote the talent and the interest of learners.

Standard 5: Education Evaluation and Measurement

Education Measurement and Evaluation are procedures to be used by teachers for learner quality development. The outcomes of these two activities are data and information concerning learners' development, progress and achievement, as well as data useful for promoting learners' full development potential.

Educational institutions must formulate principles and guidelines of learning measurement and evaluation to be applied by all concerned. Educational institutions must accumulate outcomes of learning measurement and evaluation at all levels: classroom, own institution, educational district, whole country, as well as those conducted by outside evaluators. These are evidence to confirm learners' quality to satisfy everybody concerned inside and outside educational institutions.
Classroom measurement and evaluation are conducted to find out results from management of learning activities, whether learners have actively gained knowledge, been instilled moral behaviour and desirable value. Therefore, appropriateness to learners' learning process. These two activities may be continuously conducted in parallel with learners' learning process. Measurement and evaluation processes shall cover conduct, behavior, learning procedures, activities participation, project work or portfolios. Important users of classroom measurement and evaluation files are learners, instructors, parents and guardians. They must jointly stipulate goals, procedures and search for information as well as rules and regulations required for reflecting and restricting learning procedure outcomes. Learners will understand group's as well as individual learner's needs. Subsequently they are able to arrange grade score, or to form learners groups, and own self-learning management evaluation. Parents and guardians can find out learners' level of achievement.

Educational institution measurement and evaluation must be conducted by the institutions to check learning advancement in each class, each grade level and each year. Relevant information must be used as guidelines to up-grade teaching-learning processes, and for assisting learners to meet learning quality standard. Each class and grade level assessment must also be used for learners up-grading. In the events of learners' failure to meet standards in any subject groups, educational institutions must arrange remedial teaching and administer learning evaluation.

National measurement and evaluation must be conducted at the end of the last year of each grade level learning. Educational institutions must make arrangement for learners to be evaluated in significant subject groups. Data received from evaluation process must be used for each educational institution as well as for learners' quality development. (Ministry of Education. 2008)

It can be concluded that the teachers' competencies regarding the standard of educational measurement and evaluation are as follow:

(1) The ability to measure and evaluate according to the truth.

(2) The ability to apply the evaluation outcome to the improvement of pedagogy and to the curriculum development.
Standard 6: Education Institute Management

Based on the State's vision which confirms education policy in building up quality manpower, creating jobs to redeem the economy and social crisis, establishing sustainable national security, strengthening the nation through education, revising the education infrastructure and systems, emphasizing quality, effectiveness and equality, applying education technology, having a firm belief in education for creating manpower, integrating education, religion and culture in learning reformation and national education policy for creating jobs, assuring knowledge and career for the youth. Educational institutions management must be responsible for providing details for each academic year or semester, to make them relevant to communities and society's problems and intellectual output as well as desirable goals. Learners must be good members of the family, community, society and the country. Consideration also be given to the relevancy to each group of learners' potential, aptitude and interest.

Education institute management emphasizes the importance of knowledge thought, capability, morality, learning processes and social responsibility. The aims are to foster the well balanced development of each individual as learner is the most important. Every one is capable of learning and self-development; learners shall be encouraged to develop themselves in line with their natural inclinations, and to fully realize their own potential. The following subjects are considered very important: i.e. knowledge about self, relationship between self and society, family, community, country and the world; Thai society historical development, political system, democratic government and monarchy under constitution; science and technology knowledge and skills; knowledge, and sustainable experience in management, preservation and utilization of natural resources and environment; knowledge about religion, art, culture, sports, Thai wisdom and their application; knowledge and skills in mathematics; languages and their application, in particular Thai language; knowledge and skills in careers; knowledge and skills in leading a happy life. (Ministry of Education. 2008)

It can be concluded that the teachers' competencies regarding the standard of educational institute management are as follow:

(1) The adoption of leadership.
(1) The ability to manage the class.
(2) The ability to communicate qualitatively.
(3) The ability to coordinate the advantage.
(4) The ability to apply new innovations to the administration.

Standard 7 : Education Research

Educational institution are responsible for administering learning development which emphasizes thinking processes, management and confronting real situations and the application of knowledge for preventing and solving problems; organizing activities to enable learning from actual experience; arranging practical exercises to enhance skills in doing, critical thinking and satisfactory achievement; fostering reading habits, the thirst and continuous search for knowledge, inculcating skills for a well balanced integration of all subjects; facilitating learning processes to enable learners to be all round knowledgeable. In application of learning, research procedures must be as part of learning processes. Management of learning process consists of different forms and methodologies in order to respond to learners' aptitude, interest and needs. Teachers are required to integrate research procedure in learning management for learner's quality development. Learners must be stimulated to learn and to be able to apply research procedure for learning activities. Research procedures consists of series of actions in respective order, namely problem analysis, establishment of plans to solve problems or to create development activities, implementation of plans, data collection, research output, conclusion, report and utilization of research results. (Ministry of Education. 2008)

It can be concluded that the teachers' competencies regarding the standard of educational research are as follow:

(1) The ability to apply the research outcome to the learning & teaching.
(2) The ability to carry out the research to develop the learning & teaching, and to develop learners.

Standard 8 : Education Innovation and Information Technology

To live, learn, and work successfully in an increasingly complex, information-rich and knowledge based society, students and teachers must utilize technology effectively. Within a sound educational setting, technology can enable students to become:
• Capable information technology users
• Information seekers, analyzers, and evaluators
• Problem solvers and decision makers
• Creative and effective users of productivity tools
• Communicators, collaborators, publishers, and producers
• Informed, responsible, and contributing citizens

Through the ongoing and effective use of technology in the schooling process, students have the opportunity to acquire important technology capabilities. The key individual in helping students develop these capabilities is the classroom teacher. The teacher is responsible for establishing the classroom environment and preparing the learning opportunities that facilitate students' use of technology to learn, and communicate. Consequently, it is critical that all classroom teachers are prepared to provide their students with these opportunities.

Today's classroom teachers need to be prepared to provide technology-supported learning opportunities for their students. Being prepared to use technology and knowing how that technology can support student learning have become integral skills in every teacher's professional repertoire. Teachers need to be prepared to empower students with the advantages technology can bring. Schools and classrooms, both real and virtual, must have teachers who are equipped with technology resources and skills and who can effectively teach the necessary subject matter content while incorporating technology concepts and skills.

As stated above, the policy goal of the technology literacy approach is to prepare learners, citizens, and a workforce that is capable of taking up new technologies so as to support social development and improve economic productivity. Related policy goals include increasing enrollments, making quality resources available to all, and improving literacy skills, including the use of a range of hardware and software resources and tools. Teachers should be aware of these goals and be able to identify the components of education reform programmes that correspond to these policy goals. Corresponding changes in the curriculum entailed by this approach might include improving basic literacy skills through technology and adding the development of ICT skills into relevant curriculum
contexts. This will involve time within the traditional curricula of other subjects for the incorporation of a range of relevant productivity tools and technology resources. Changes in pedagogical practice involve the use of various technologies, tools, and e-content as part of whole class, group, and individual student activities. Changes in teacher practice involve knowing where and when (as well as when not) to use the technology for classroom activities and presentations, for management tasks, and to acquire additional subject matter and pedagogical knowledge in support of the teachers' own professional development.

Little change in social structure occurs in this approach other than, perhaps, the spatial placement and integration of technology resources in the classroom or in labs to assure equitable access to all. The technologies involved may include the use of computers along with productivity software; drill and practice, tutorial, and web content; and the use of networks for management purposes.

In the early stages of development teacher competences related to the technology literacy approach include basic digital literacy skills along with the ability to select and use appropriate off-the-self educational tutorials, games, drill-and-practice, and web content in computer laboratories or with limited classroom facilities to complement standard curriculum objectives, assessment approaches, unit plans, and didactic teaching methods. Teachers must also be able to use ICT to manage classroom data and support their own professional development. UNESCO. 2009

It can be concluded that the teachers' competencies regarding the standard of Educational innovation and information technology are as follow:

1. The ability to select, devise, construct, and improve on the innovation for the good learning of learners.

2. The ability to develop the information technology for the good learning of learners.

3. The ability to quest for a variety of learning sources to promote the learning of learners.
Pedagogue means a person engaged in one of the teaching profession or any persons whose occupation is teaching or a person who instruct in a pedantic or dogmatic manner. (Dictionary. 2008) The expert pedagogue must be able to perform as follow:

1. To adopt the kindness, affection, and good wishes on learners.
2. To acquire the perseverance and responsibility.
3. To become a person of learning, and the academic leader.
4. To acquire the vision.
5. To acquire the faith in the teacher profession.
6. To pursue the teacher profession etiquette.

2.6 REVIEW OF THE PAST STUDIES

2.6.1 Introduction

The review of the past study is an important part of the scientific approach and is carried out in all areas of scientific research whether in the physical sciences, natural science, or social science. It helps the researcher to develop thorough understanding and insight into area of research and the trends that have emerged. Therefore, the researcher has made an attempt to survey the literature related to the professional characteristics of teachers and supervisory performance in school before rushing into planning and procedure of the study.

2.6.2 Importance of the review

Aggarwal (1975) stated the importance of the review of the literature as follows:

1. The review of the literature is the basis of most of the research project in the physical science, natural science, social sciences and humanities.
2. A review of the related literature gives the scholar an understanding of the previous work that has been done.
3. The results of the review actually provide the data used in the research.
4. It enables us to know the means of getting to the frontier in the field or our problem.
5. A review of the literature would develop the insight of the investigator.
(6) The importance of the review is quite obvious in delimiting the research problem and in defining it better.

(7) The review of the literature will give the student insight he needs to convert his tentative research problem to a specific and concise one.

(8) A review of the literature can help the research worker in making him alert to research possibilities that have been overlooked.

(9) In the process of reviewing the literature the student is on the alert for finding out research approaches in his area that have proved to be sterile.

(10) The review of the literature provided an opportunity of gaining insight into the methods, measures, subjects, and approaches employed by other research workers. This in turn, will lead to significant improvement of the research design.

(11) A careful consideration of the chapters entitled recommendation for further research in various research studies guides.

The researcher regarding the suitability of a problem and in assisting her to delimit the research problem. Generally attitudes of respondents have been studied in relation to some other variables and as complementing part of investigations mainly concerned with some other issues.

Review of the past studies is necessary to show the available evidence to solve the problem adequately and thus the risk of duplication can also be avoided. Again it is necessary to provide ideas, theories, explanations or hypothesis valuable in formulating the problem. It also suggests methods of research appropriate to the problem, to locate comparative data useful in the interpretation of results and to contribute to the general scholarship of the researcher.

The researcher, in this chapter has presented the review of past researches related to teachers’ competencies studied in different countries.

2.6.3 Review of the past researches related to teachers’ competencies

The researcher has reviewed 10 past studies related to teachers’ competencies. The review of the studies has provided a thoughtful guideline in understanding the objectives of the study, variables of the study, sample of the study,
The reviews of past studies are as follows:

**Study 1**


Professional development is an important component to all adult education programmes. With the advent of the Pennsylvania Department of Education, Bureau of Adult Basic and Literacy Education's (ABLE) continuous programme improvement initiative known as Education Quality for Adult Literacy (EQUAL), the importance of professional development has been brought to the forefront. As the EQUAL initiative has grown each year, so has the wealth and availability of professional development opportunities. With so much "training" available to teachers, administrators, and tutors, the question arises: How is valuable professional development time best spent? More importantly, how is professional development tied to individual teaching needs? Further, what impact does participation in professional development have on the classroom? The teachers in the Somerset County Technology Center Adult Education programme have been strong supporters of EQUAL and its professional development activities. However, relating professional development to its effectiveness in the classroom has been a difficult task to measure. During programme year 2000-2001 our Programme Improvement Team chose to participate in the Teacher Competency Strand as part of its EQUAL initiative. Two teachers volunteered to participate in the training in which they would assess their teaching skills against a set of teaching competencies developed under the Teacher Competency Training Strand. The method used to assess their skills was for the teachers to rate their teaching performance against a core measure of competencies. At the end of the assessment the teachers chose two competencies upon which to focus. One competency was an identified need, and professional development was implemented through the year to improve that teaching skill. The second selected competency was strength, and the teacher would show proof of his or her competence in this area by validating work performed through the year. To document their performances the teachers maintained a portfolio of professional development, achievements, lesson plans, and activities. At the end of the year the teachers reassessed their skills against the competencies to determine if professional development growth had taken place.
Statement of the Problem and the Setting

Teachers' competencies in adult education has become a means to qualify and bring accountability to a field that has been criticized for lack of such measures when compared to traditional education methods and systems. In 1993 the newly appointed director of the Pennsylvania Department of Education's Bureau of Adult Basic and Literacy Education, Cheryl Keenan, sought to bring value to the field by implementing a system of continuous programme improvement and professional development. The EQUAL initiative was implemented in 1994 with 22 pilot site agencies. The new initiative sought to focus on programme individuality and how best to identify each programme's specific professional development needs (Keenan, 1999). Over the years the EQUAL process has grown in phases to include all of the state's 230 adult basic and literacy education programmes. As part of the process programmes are involved in making "programme improvement plans," which map out the programme's goals for the year. Those plans include participation in one of several selected training strands. During its initial 2000-2001 Programme Improvement Meeting the Somerset programme chose to participate in the Teacher Competency Strand. It was our belief that our teachers participated in many professional development activities but had no specific measure of those activities and their effectiveness as they related to their classroom teaching performance. Bridging the gap between professional development training and classroom application was not always clearly identified or measurable. The Teacher Competency training would provide a means by which teachers could gauge their strengths and weaknesses. By identifying teaching skills and rating them, teachers would be able to identify particular strengths and weaknesses and then map out a specific professional development plan for themselves. First, the individualized plan would enable teachers to build upon their strengths and to develop new and stronger 60 Theory-to-Practice means of classroom instruction as well as sharing that expertise with programme teachers. Second, identifying some weaknesses would provide the basis for working toward specific goals for improvement, identifying professional development activities to improve skills, and, thereby, becoming stronger teachers. The Somerset County Technology Center Adult Education programme operates in the Appalachian region of southwest Pennsylvania. Somerset County is a large, rural county consisting of numerous small communities with primary employment centering on tourism, agriculture, and light industrial manufacturing.
Nine part-time teachers and a programme administrator staff the literacy programme of the Somerset County Technology Center. Volunteers who assist in tutoring students supplement instruction. The programme receives funding from the Pennsylvania Department of Education as well as local Workforce Investment Act (WIA) grants. Grants include Federal 231, State Act 143 Literacy, State Act 143 Family Literacy, WIA Adult Literacy, WIA Youth Literacy, and WIA Dislocated Worker. The programme serves approximately 300 students each year under these programmes. Programming includes adult basic education (ABE), preparation for General Education Diploma (GED), family literacy, and English as a second language. Classes are conducted throughout the county and are scheduled at various times to accommodate students. Teachers are assigned to classes for the year, and most classes are multi-level, serving the range of students from basic to GED level. However, there are some specified classes that serve specific levels of low ABE, GED, and ESL students as well as specified Family Literacy classes. With many teachers instructing a wide range of students, traditional classroom approaches and techniques are not appropriate. An individualized approach is used which makes the teacher's job that much more difficult. Historically adult education teachers have a wide background of credentials and experiences, with many coming from traditional secondary teaching preparations. Many are not adept at handling such a wide spectrum of educational needs. Thus, the need for professional development has played an important role in targeting teacher skill development.

Research Design

Each year teachers at the Somerset County Technology Center participate in professional development activities as part of its Programme Improvement Plan. The teachers participated in these activities, but they do not have a good measure of the effectiveness of these activities in the classroom and the impact on their teaching skills. Choosing to participate in the Teacher Competency Strand gave the participating teachers an opportunity to assess their skills, choose an appropriate professional development "track," and, most importantly, document their activities through a portfolio. For this project two teachers volunteered to participate as part of the school's EQUAL programme improvement activity. One teacher is new to adult education and works primarily in the family literacy programme. The second teacher is an experienced educator in adult
education and adult literacy and works in family literacy as well as other GED and ABE classes. The two participants, along with the administrator, attended the Teacher Competency kick-off in October of the programme year. During the initial training, the participants became familiar with and completed the Teacher Competency Assessment Instrument, known as the Self-Directed Staff Development Assessment Instrument. This tool is the baseline instrument used to rate the participant's skills against the core measure of competencies. After the initial training was completed, the administrator scheduled an interview with each of the participating teachers to review the assessment and to develop a Professional Action Plan. The Professional Action Plan entails selecting two competencies from the assessment instrument upon which to focus. The one competency is an identified need, and the other is identified as a strength. The Professional Action Plan is then developed to map out the documentation of strengthening the weakness and of validating the strong competency. Activities, along with a timeline, are developed to achieve those goals. Objectives are identified as to their impact on learners, colleagues, and/or the programme. To document the progress, each participant maintains a portfolio illustrating his or her professional development activities and implementation in the classroom. At the conclusion of the programme year the participants are asked to reassess their skills to measure the impact of the intervention. Choosing which competencies teachers may select for implementation in their professional action plan is a process that teachers and administrators may choose to work out and negotiate together. The self-assessment guide is a good discussion document by which teachers and administrators may share perspectives on a teacher's abilities, skills, and styles, as well as programme needs, goals, and priorities. This process brings mutual improvement to the teacher as well as the programme.

Following negotiations, the novice teacher chose, as her need, to work on a competency to improve curriculum. She chose Standard B—Instructional Expertise, Unit 1—Exhibits Command of Content, Competency 2—Develops and Organizes Curriculum. The teacher planned to create Parent and Child Together (PACT) activities that would incorporate learning and hands-on activities for families involved in her family literacy class. The teacher planned to create four thematic dinners throughout the year that would involve learning activities for the whole family. The lesson plans included such concepts as
budgeting, measuring, and planning, as well as communications and teamwork. Her portfolio included both lesson plans and student work by including pictures and written comments by the children. The experienced teacher decided to improve community interaction through the use of technology, working on Standard C—Community Interaction, Unit 2—Encourages Adult Learner Involvement in the Community, Competency 2—Utilizes Technology to Build Student Awareness of the Community and the World. Her goals were to use the Internet to access information on community issues and resources, to teach learners to access information on community issues and resources, and to integrate and create computer-based assignments related to community and work issues. Her portfolio included computer-based assignments, Internet search guides, and lesson plans, as well as a catalog of community web sites, which students may access.

Tools used in the study

The main tool used in this project is the Self-Directed Staff Development Assessment Instrument. The instrument was originally developed in 1999 and comprises five standards, 13 subunits, 29 performance indicators, and 139 competencies. The five main standards are categories that represent broad areas of teacher responsibility and practitioner skills. The first standard, Understands and Uses Adult Theory in Practice, was designed to assess teachers' knowledge and use in implementing adult theory within the classroom. The second standard, Instructional Expertise, assesses the real "nuts and bolts" issues of teaching in an adult education classroom. Teaching skills such as command of subject area, use of curriculum, and use of instructional plans are addressed in this standard. The third standard, Community Interaction, addresses practitioners' collaborative efforts in using community resources, as well as encouragement and guidance of their students' role and involvement within their community. The fourth standard, Professional Development, assesses teachers' ongoing commitment to lifelong learning and continuous professional improvement. The final standard, Programme Operations, assesses teachers' knowledge of their role within an organization. Participants are asked to rate themselves using the instrument. For each of the 13 subunits the participants are asked to assign a value for teaching relevance and programme priority. The values assigned range on a scale from one to five, with one being low relevance or priority and five being high relevance or priority. The ratings in these subunits are important for assessing the views that are of
importance to the participant. Each subunit has a set of competencies that reflect skills within the topic area, and each competency has a teaching level assigned to it. This level indicates the degree in which a teacher should hold proficiency with the competencies. The three performance levels are novice, experienced, and master. The novice level would indicate a teacher who is engaged in core teaching competencies as part of his/her professional development. The experienced level denotes a teacher who has demonstrated effectively 90% of entrance-level competencies and has taken a leadership role in professional development at the local or regional level. The master level indicates a teacher who has mastered 90% of the experienced level competencies, is engaged in a plan to master experienced-level competencies, and has taken a leadership role in professional development at the state or national level. Participants assess their skills against these standards by rating their practitioner's expertise using a scale of one to five, with one designating low expertise and five designating a high level of expertise. The benefits of this instrument are the weighted levels within the subunits and competencies and how the instrument affects each participant on an individual basis. The individuality of this instrument lends itself to the particular needs of a teacher who comes to this field with a varied background in education and experience. In the field of adult education this type of assessment is important so that teachers may focus on skills that have been identified as core needs and allows them to move through a hierarchy of ability.

Major Findings

Each teacher was asked to complete the Self-Directed Staff Development Assessment Instrument in a pre- and post-measure technique. The pre-assessment was conducted in the beginning of the programme year prior to the implementation of professional development activities. Throughout the programme year the teachers implemented professional development activities as identified by their Professional Development Plan, which was developed from the Self-Directed Staff Development Assessment Instrument.

At the conclusion of the programme year, the teachers were reassessed with a post measure to determine if the professional development activities identified in the Professional Development Plan were effective. Of the 139 competencies there are 65 novice-level
Rating points are assigned to each competency using a scale of one to five. Therefore, a comparison of the pre- and post-measures can be made for each of the three competency levels. The self-assessment measures were tabulated for each teacher and compared. The data that were examined compared changes in self-assessed skill levels for each competency using the one-to-five rating scale at the three levels of novice, experienced, and master. Data from the experienced teacher indicated an increase at each level. At the novice level the teacher increased her overall rating by 29 points. At the experienced level this teacher increased by 32 points. Finally, at the master level the teacher had an overall increase of 12 points. The novice teacher had very similar results. She increased 31 at the novice level, 32 points at the experienced level, and 18 points at the master level. If a top rating of five was attributed to each category and tallied, there would be an achievable total of 325 in the novice level, 255 in the experienced level, and 115 at the master level. The experienced teacher's totals for each level on the pre-assessment were 267 for the novice level, 180 for experienced, and 61 for the master. Therefore, this teacher posted significant gains at each level. For the novice level she posted an 11% gain, 15% at the experienced level, and 16% at the master level. The novice teacher's totals were 236 for novice, 158 for experienced, and 39 for master. Her increases were also significant. She had a 12% increase at the novice level, 17% for experienced, and 32% at the master level. At the conclusion of the project, the teachers were asked to reflect upon their participation in the project. Both teachers felt that participation in the project was a very positive experience, that their teaching confidence increased, and that each grew "professionally." The teachers' comments were inspiring. Following are some of their comments.

The Reflection on the Intervention

The intervention of having teachers becoming involved in self-assessment of skills against a set of competencies and developing a professional development action plan has been a positive and rewarding endeavor for the participants as well as the programme. Through the intervention the teachers were able to gauge their teaching effectiveness by assessing their own skills and judging those skills against a set of standards. This process allowed the teachers to focus on their needs, as well as on their strengths, and to develop a professional development plan that allowed them to use this information to improve their
skills. The highlights of the project were the portfolios developed by the teachers to document their professional development activities throughout the year. The portfolios were a tangible record of accomplishments, something to reflect back on and to keep as a reference for future use. The portfolios provided documentation of growth and something of which to be proud. There are many implications for the future use of this process. The use of teacher competencies and the development of a portfolio can provide a concrete and fair means of teacher evaluation. Identifying teacher competencies can also be a means to qualify participation in training and other professional development activities. As an adapted tool, teacher competencies can be used as a measure to hire a new teacher.

The Teacher Competency Strand was a proving ground. Through participation in this project our teachers were able to share their progress throughout the year during our programme improvement meetings. This sharing has laid the groundwork for all teachers in our programme to be aware of this opportunity and to participate in this activity for the coming year. As an administrator, I believe that this activity was of great benefit to both the programme and the teachers. It is anticipated that this activity will become a programme-wide activity in which all staff will participate. Lifelong learning is a goal for everyone. This statement rings particularly true for adult educators. Involvement in such professional development activities as this project is an important step in bringing professionalism to our field.

Study 2

“A study of teachers’ competencies that effect change in secondary science teachers’ classroom practice” (Centre for applied research and educational improvement, University of Minnesota, Minneapolis, U.S.A. 2004)

Objectives of the study

The purpose of this study was to identify teachers’ competencies that help teachers successfully translate full inquiry skills into their science teaching practices. Both science content and process were integral to the professional development opportunity that is the focus of the study. The content, monarch butterfly ecology research, provided a means to engage teachers and their students in meaningful, authentic (real-world work of scientists) inquiry.
Sample of the study

The sample of the study was 20 teachers. The study indicated the outcome of teachers’ competencies of professional development opportunity that consisted of 2-week-long resident institutes for teams consisting of a secondary science teacher and two students. The science content of the National Science Foundation (NSF)-funded professional development institute was monarch butterfly ecology. The first institute took place in Minnesota during the summer, and the second in Texas during the fall. Staff scientists provided intense instruction in inquiry, with numerous opportunities for participants to conduct short inquiry-based research projects. Careful attention was paid to introducing each step of the full inquiry process, from asking questions to presenting research findings. All participants conducted independent team full inquiry projects between the two institutes.

Tool to be used in the study

The processes of authentic inquiry were utilized throughout the programme, providing practice in an array of complex integrated science process skills and research methodology.

Method

Data Collection

A mixed methodology was used to identify the degree to which teacher content knowledge and use of inquiry increased. The Qual-Quan method (Gay & Airasian, 2003), in which the qualitative phase occurs first, followed by a quantitative analysis of data, provided structure for the analysis. Several sources provided information on teachers’ use of inquiry-based practices. First, teachers completed an initial written survey of their current use of inquiry-based projects and field experiences. In this survey, teachers were asked to describe, in detail, any inquiry projects that they did in their classrooms (Appendix A). An identical written survey was completed several months after their participation.

Second, copious field notes were kept of project staff conversations with teachers during the institutes, classroom visits, interviews of project staff, and observation of institute activities. Notes during the institutes were taken by the PI or an evaluator; when an evaluator
was present the conversations were taped. The PI did not facilitate the conversations, so she was free to record everything that was said. Taped interviews with project staff were conducted after the institutes. Although there is concern about staff members providing these kinds of data (Merriam, 1990), no individual’s job depended on the outcome of the evaluation, and much of the note-taking and conversation occurred in the context of formative evaluation, because the staff wanted to learn as much as they could to improve the project. The evaluators also compared staff accounts with those given by participants.

Third, project staff evaluated the completion and quality of the monarch monitoring data and team-generated research projects. Fourth, case studies were developed on 20 teachers. Criteria for inclusion in a case study were location and grade level, with teachers selected to assure representation across the spectrum of participants from each of the five institutes. Twelve case study teachers were from Minnesota, two were from Wisconsin, and six were from Texas. Seven teachers were from high schools, nine from middle or junior high schools, and four from middle through high school. Case studies included information gleaned during the phone interviews and the sources described earlier. All case study teachers were interviewed twice each year after their participation, until the project ended: the first group for 3 years; the second and third groups for 2 years; and the fourth and fifth groups for 1 year. Writing of the case studies was completed during summer 2001. The evaluator sent each individual a copy of their case study for review, asking them to check for accuracy of the facts and for plausibility of the conclusions as recommended by Merriam (1990). Teachers made a few suggestions for additions, which were incorporated. All participants, including case study teachers, were given an opportunity to review all the case studies (pseudonyms were used) as well as the summative project report on the evaluator’s web site (Freeman & Jeanpierre, 2001). To assess gain in content knowledge, a pre-assessment of teacher content knowledge of monarch biology and research techniques were conducted at the beginning of the first institute. This provided baseline data on teachers’ knowledge of monarch biology and ecology. An identical post-assessment was given at the completion of the second institute to allow a comparison of change in teachers’ knowledge. The assessment was written by the PI and ecology graduate students. Quantitative statistics included on the proportion of teachers that were giving students the
opportunity to conduct inquiry-based projects before and after their participation, and a test on change in teachers' content knowledge. Prior to the professional development, project evaluators categorized teachers into three categories, based on their description of inquiry projects. The pre-institute descriptions included:

(1) Doing inquiry: teachers' descriptions of classroom practices revealed that they used inquiry during science instruction. Teachers had to give examples of activities that included all steps of the inquiry process (observing, questioning, developing hypothesis, conducting experiments, analyzing data, and presenting findings) during interviews or in written summaries of their classroom practices.

(2) Almost doing inquiry: teachers gave examples of inquiry practices, but the consistency of applications of inquiry steps varied; they did all parts of the inquiry process, but in different projects, or covered all but one or two steps in the same project.

(3) Not doing inquiry: teachers did not include detailed examples of consistent inquiry practices, or examples in which they used at least three of the steps of the inquiry process in their classroom activities. The same categories were used post-institute.

These categories were chosen based on the goals of the project, and the recognition that inquiry, as defined earlier, is an excellent way to teach both science content and inquiry-based processes (e.g., National Research Council, 1996, 2000). Students who only participate in intensive hands-on activities learn little about the concepts or the nature of experimentation; instead, they need sustained opportunities that require them to learn how to ask questions, analyze unfamiliar problems, decide what strategies to apply, learn to recognize the benefits and limitations of experimental approaches, and learn to make decisions about when to persist in completing an investigation and when it makes sense to try a different approach (Schauble, Glaser, Duschl, Schulze, & John, 1995). It is this approach that was advocated in the institutes, and assessed in the evaluation.

Formative evaluation occurred throughout the project, and much of the information used in the formative evaluation also became part of the summative evaluation. Evaluators attended several of the institutes and met with staff throughout the project, and many small modifications meant that the experiences of the five groups were not identical. Examples of changes include: the stipend payment schedule was changed to provide incentive to finish
the required team research project in a timely manner; the amount of time between the
two institutes was increased to provide more time for monitoring and team projects; more
social time for students; more regular staff/teacher meetings were added; and more explicit
information was provided about the roles of teachers as both students and teachers during
the institutes. Although the experience of the groups changed slightly, this summary of
findings does not take into account the group in which a teacher participated. The relatively
small sample size and other uncontrolled differences between groups (such as weather,
group dynamics, and monarch population dynamics) meant that it is impossible to assign
any differences between groups to particular factors, including changes made in response
to the formative evaluation.

Data analysis

The assertions that follow were validated through triangulation of findings using
multiple data sources, including the pre- and post-assessment of teachers' content
knowledge, field notes, classroom and professional development observations, telephone
interviews, and written survey data. The 20 rich descriptive case studies were completed by
analyzing all qualitative data sources for emergent themes and patterns. Upon completion
of all data analysis, teachers were placed into one of three identified categories: doing
inquiry; almost doing inquiry; or not doing inquiry. The case studies included both individual
institute and across-institute analysis of all 20 case study teacher participants. Using the
qualitative programme NUD*IST NVIVO, researchers completed a variety of coding
processes. The analysts performed both line-by-line coding and various lengths of text
segment coding. In addition, the NVIVO programme was used to gather text segments from
the 20 case studies, which were then put into a report for each category code (quality of
professional development) and product (authentic team research project and classroom
inquiry). These reports were analyzed to determine the main themes and patterns that
emerged within each of these category codes across institutes. This analysis led to the
identification of the key characteristics of successful professional development institutes
presented in what follows.

This interpretation of case study is situated in the perspectives of Creswell (1998)
and Yin (1984). The case study is an exploration of a bounded system over time that
includes data collection involving multiple sources of content-rich information (Creswell, 1998). In this study, the sources of information included all of the aforementioned sources. The focus of the case studies are the teachers, and the way in which their professional development experiences impacted their classroom practices. Yin (1984) observed that a case study examines a phenomenon within its real-life context and, in this study, it was teachers' classrooms.

Major findings

Project findings show that the number of teachers providing opportunities for their students to conduct full inquiry increased significantly after their participation. A mixed-methodology analysis that included qualitative and quantitative data from numerous sources, and case studies of 20 teachers, revealed that the characteristics of the programme that helped teachers successfully translate inquiry to their classrooms were: deep science content and process knowledge with numerous opportunities for practice; the requirement that teachers demonstrate competence in a tangible and assessable way; and providers with high expectations for learning and the capability to facilitate multifaceted inquiry experiences.

STUDY 3

"A Study of Teachers' Competencies in the Teaching of Mathematics in English in Malaysian Secondary Schools" (University of Technology, Malaysia: 2005)

Schools play a variety of important social, custodial and organizational roles in communities and with schools, teachers who have the primary obligation to help students to learn how to recognize and solve problems, comprehend new phenomena, construct mental models of those phenomena, and, given a new situation, set goals and regulate their own learning. Parents on the other hand gauge the competency of teachers based on the academic performance of their children. In today's competitive era where good grades seem to be the yardstick of a child's intelligence and to many, are the academic goals of both parents and children, teachers' competency is put to test. Competency is seen here as the ability of the teachers to deliver knowledge using the necessary medium, be it the language or the tools. In this paper competency will be treated from three different strata, namely, the competency to use the English language to deliver the content, the competency to integrate ICT in the teaching of the subject and the competency to apply, utilize and
exploit the teaching aids supplied by the Ministry of Education for the teaching of the subject, in this respect, Mathematics. As of 1970, students enrolled in primary schools in Malaysia were taught all subjects, except the English language in Bahasa Melayu. Only those who started schooling in 1969 and before, who were in an English-medium education had the privilege of being taught some subjects, which include Mathematics, in English. With the very limited number of English-medium schools in those days, it is not surprising that the majority of the below 40 year-old teachers teaching Mathematics in schools today, are those who had been taught the subject in Bahasa Melayu in their primary, secondary and even tertiary education. In short these teachers have had very little exposure to the subject, in this sense, Mathematics, in English and to the majority, they have very little exposure in using the language in their daily lives. Information Communication Technology (ICT) is also a fairly new phenomenon in the school context in Malaysia. It started taking roots in the Malaysian education system only recently when the SMART School system was first introduced in the late 1990s. Since the number of SMART Schools in the country was rather small in its early days, only a very limited number of teachers in the country have had the experience of integrating the technology in the classroom while the majority of them are still in the dark as far as using the technology in the classroom is concerned. Some may argue that for many of the younger teachers, they should have at least used ICT while pursuing their tertiary education. This may be true but using it as part of a medium to assist them in completing assignments is not the same as using it as a medium to disseminate knowledge, of which teachers teaching Mathematics and Science in schools today have to adopt. With the change in the medium of instruction in the teaching of Mathematics in primary and secondary schools in Malaysia from Bahasa Melayu to English language introduced in 2003, and, with the integration of ICT in the teaching of the subject, teachers' competency in delivering and disseminating knowledge in the subject is put to test. This is so because in many cases, many of the teachers who have been assigned the task to deliver their teachings in the English language, have had little exposure to the English language itself both in their learning of the subject during their primary and secondary education, and in the process on learning how to teach the subject during their tertiary education. As a result of this, many teachers who have been entrusted with the responsibility to teach Mathematics in English language in schools using ICT are faced with
a dilemma. First of all, they lack the language to deliver the content to the students for reasons stated above. Secondly, they are not familiar with the terminologies and mathematical terms in the English language due to minimal exposure to learning and teaching mathematics in the English language. Thirdly, many have had little exposure, if any, in integrating ICT in their teaching and last but not least, although the software for teaching the subject is being supplied by the ministry, using these teaching aids effectively in the classroom may become a big problem to many who have had very little experience of even handling the hardware. This is so because, in the teaching of Mathematics, it is not as simple as just starting the programme and letting it play to the end but it involves stopping and pausing the programme at the right places and elaborating the steps in solving the mathematical problems and equations. Apart from that, to make the teaching more effective teachers should be able to apply the content of the teaching to everyday situations, to explain steps in solving the problems, and to do these, teachers need none other than a good command of the language of instruction, in this respect, the English language, the ability to integrate ICT in their teachings and the knowledge to apply, utilize and exploit the teaching aids supplied by the Ministry of Education to make the learning experience of the students as effective as possible. Inability to deliver the content effectively due to lack of expertise in the language and lack of skills in using the technology may have detrimental effects on the students. These may lead to some multiple effects, which may include testing the students' endurance leading to lack of concentration among them thus resulting in lack of interest in the subject which will eventually cause poor performance in the subject. Given time, the good ones will no doubt become better but the not-so-good-ones or the poor learners will suffer. As a result of this, parents' trust too may diminish. The above are the questions we wish to unveil the answers to in this study and it is hoped that the results will shed some lights to the parties concerned so as to make the teaching of Mathematics in Malaysian schools as effective as it should be for the betterment of the future generation.

Research Methodology

The data for the research were collected from six different zones in both West and East Malaysia and each zone was represented by a particular state. For the northern zone, data were collected from respondents in the state of Kedah, Western zone from Selangor, Southern zone from Johor, and Eastern zone from Kelantan. The two states in East Malaysia
each represented a zone, namely the Sarawak and Sabah zones. A total of 575 respondents who are teachers involved in the teaching of Science and Mathematics in English (PPSMI) in secondary schools participated in the research. The respondents were selected using the purposive sampling method. Questionnaire was used as the instrument for data collection. The questionnaire was constructed and designed by the researchers themselves using the model introduced by Stufflebeam (1966), known as the CIPP Model, as a guide. It was built based on the objectives of the research, in line with what was proposed in the adopted model. A four-level Likert Scale (1967) was used in the research as a form of measurement of the respondents' responses and they are represented as follows: (1) represents Disagree (24% and less), (2) represents Somewhat Disagree (25% - 49%), (3) represents Agree (51% - 74%) and 4 represents Strongly Disagree (75% - 100%). The responses given by the respondents were collected and later analyzed using SPSS (Statistical Package for Social Science for MS Windows Release 10.05) software. The statistical analyses used in the research were frequencies and percentages. The reliability (Alpha Cronbach) level of the questionnaire is 0.92.

Major Findings

Language is a very important tool used by teachers to deliver knowledge, instruction and skills to students. The ability of teachers to use language effectively in their teachings will not only help students to understand the subjects better but also will lead to many other positive traits such as it will raise interest amongst the students on the subjects themselves, students' attitude towards the subjects will be positive, thus resulting in higher motivation to learn more, and the end result will be none other than better grades in the subjects. In this study three aspects of teaching ability as reported by the respondents of the study have been discussed. They are: (i) Teachers' speaking ability, (ii) Teachers' reading ability, (iii) Teachers' writing ability

1. Teachers' speaking ability

It was found that 17.4% and 38.6% respondents strongly agree and agree respectively on the statement that they have the spoken ability teach Science and Mathematics in English, whereas 42.9% do not agree to this statement. This finding is considered as a big setback for the implementation of the teaching of Science and Mathematics in English because quite a high percentage of the respondents admitted to
lack of ability to teach Science and Mathematic in English. This problem could be associated with other factors, such as their inability to speak and pronounce words correctly, lack of knowledge of the English grammar and their inability to effectively use transitional marker in the teaching of Science and Mathematics. It was also found that there are a number of respondents who could not deliver their ideas during the discussion sessions, some were unable to discuss experimental results, and explain the experiments and problem-solving procedures systematically in Science and Mathematics.

ii. Teachers' reading ability

Reading is a very important skill that teachers should have so as to gather information and knowledge from various resources to be included or to supplement their teachings. The majority of the respondents either agreed (61.9%) or strongly agreed (22.6%) whilst only 15.2% of them either disagreed or somewhat disagreed that they can understand scientific and mathematical terms in English. This is due to the fact that some of the respondents teaching the subjects are non-optionists where they have been trained for example to teach the English language but due to their good command of the language, have been assigned to teach Mathematics in English. The findings also found that the majority of the respondents agreed that they knew how to search for information from reference books written in English and access materials in English from the internet. However, 23% of the respondents disagreed that they could access materials from the internet. This could be due to the lack of computer with internet facilities in some schools rather than in competency of the respondents to use the internet to access information.

iii. Teachers' writing ability

Planning of a lesson before teaching is a must in order to produce a good and effective lesson for the students. Teacher have to plan his/her teaching, examination questions and some of the important teaching notes. All of these activities require good writing skills to enable teachers to carry out their duties systematically and meaningfully, and for the students to understand the message and content of the subjects effectively. The results of the research revealed that 90.7% of the respondents were able to write what they have planned in English. The respondents were able to prepare their teaching notes in English. They also agreed that they can write good teaching instructions in English.
and prepare examinations question in English. However, there are some respondents (20.5%) who admitted not having the ability to prepare the examination questions in English and 15.8% respondents were unable to prepare teaching notes in English for their students. These groups of respondents should be exposed to various programmes in order to help them upgrade their knowledge and skills in teaching Science and Mathematics in English.

Improvement sometime after teaching Science and Mathematics in English Finally, the study indicated that the majority of the teachers surveyed felt that their confidence level in teaching Science and Mathematics in English improved (Item d1) sometime after the implementation of teaching Science and Mathematics in English. They expressed their feeling of comfort in teaching the subjects in English, they reported on having the ability to ask questions and respond to students’ questions spontaneously. They were also able to explain mathematical contents correctly and systematically, and to search for information from several resources. The study also found that the majority of the respondents were able to teach in English. However there are still more room for improvements since there are still a number of respondents who were unable to teach the subjects in English. The respondents also agreed that mastering the teaching of Science and Mathematics in English could improve their professionalism in education.

Conclusion

The findings of this study indicate that the majority of our respondents have sufficient level of confidence in their teaching of mathematics using English language. They can explain very well the processes and details of steps in mathematics. They are confident in asking and answering questions. The majority of our respondents are very confident in preparing question papers and writing instructions in English. They also have no problems in preparing teaching notes and lesson plans in English. This means that they are better in producing written work rather then the spoken ones. However, about forty percent of them are not good in using English in their teaching. They have problems in expressing ideas during discussions and having some difficulties in expressing opinions in this language. Many of them are also not able to use good English grammar. It is now very clear to us that a number of life-long programmes need to be carried in order to improve teachers' commands of English.
STUDY 4

"A study of competencies of elementary school teachers contribute to their professional growth in implementing inclusive classroom practices” (Jordan A.C. 2005)

Objectives of the study

This study examines the level of competencies of elementary school teachers contribute to their professional growth achieved by teachers over several years, in a school system that promotes policies for including students with disabilities in regular classrooms. It examines five general educations elementary classroom teachers' beliefs about students with special education needs and about their roles and responsibilities in working with them. Teachers were interviewed and asked to describe how they accommodate for their students with special education needs in their heterogeneous classrooms. Each participant's initial and final interview transcripts were then examined to identify the themes of change and stability that emerged in their beliefs and practices over a period of approximately 5 years of professional experience.

With local, national, and international agencies focused on raising standards in schools and classrooms, the increasing placement of students with special needs in regular classrooms, and the accepted view of teachers as being central to student success, there is a need for longitudinal research of this nature.

Sample of the study

The teachers who participated in this study were elementary school teachers in Ontario, Canada, who taught during a time of significant policy change. Towards the late 1990s, with the growing understanding of the widespread nature of disability, significant changes occurred in Ontario's special education legislation. Five teachers were interviewed about their beliefs about and practices in inclusion and were interviewed a second time four years later. In the interviews teachers described their work over the preceding school year with two students, one exceptional and one at risk of academic failure. The interviewer covers five topics: initial recognition of the learning difficulties; the programme adaptations provided by the teacher; monitoring of student progress; scope of the teacher's collaboration with resource staff, and with the students' parents.
The five teachers' earlier and later audio recorded interview data and transcripts were used for analysis in this study. All five teachers taught at the same elementary school in the Greater Toronto Area during the time of both the earlier and later interviews and volunteered to participate on both interview occasions. One teacher taught both overseas and in a northern community after his initial interview in 2000. In 2004 he returned to the same school and again participated in the study. The teachers represented in this study taught various grades from one through eight. Four of the teachers had split grade teaching assignments during one of their two interviews.

Tool used in the study

The P-I interview was designed to elicit teacher beliefs about inclusion and about the related roles of classroom teachers in an inclusive setting. The interview also explores how teachers develop in their roles and how they work with colleagues, parents and special education teachers in their classrooms. The phenomenological technique develops in a narrative style with prompting from the interviewer with questions such as "Why did you do that?" and "Did you do anything else?".

Five teachers were interviewed and asked to describe their beliefs about and practices in inclusive classrooms and were interviewed a second time four to five years later. In the interviews teachers described their work over the preceding school year with two students, one exceptional and one at risk of academic failure. The interviewers covered five topics: initial recognition of the learning difficulties; the programme adaptations provided by the teacher; monitoring of student progress; scope of the teacher's collaboration with resource staff; and with the students' parents.

The confidential interviews used for analysis in this study were conducted with teachers individually in a private room in the participating school and took between 60 and 70 minutes each to complete.

Analysis of data

The primary analysis mechanism used in this study was thematic analysis, derived from Grounded Theory (Glaser & Strauss, 1967; Strauss, 1998). The analysis initially focused on thematically analyzing and one teacher's data. Within-interview analysis of T1's
earlier interview transcript revealed patterns in her practice and these were recorded directly onto her transcript. The same inductive process was undertaken for T1's second, later transcript. Between-interview analysis, or constant comparison analysis, occurred when the patterns from T1's earlier and later interview transcripts were compared. This analysis was possible because the interviewers in the earlier and later interviews used the same interview questions to guide the participant and therefore the same topics were covered in both interviews (Powney & Watts, 1987).

The comparison of T1's earlier and later transcripts led to the sorting and reorganization of her emerging patterns into potential themes and sub-themes in the form of a broad framework structure. This allowed for the visual representation of sub-themes emerging from primary themes. The same process of within-interview and between-interview analysis was then completed for another teacher, using his earlier and later interview transcripts. New themes and sub-themes not already identified in T1's analysis were added to the broad framework structure. The patterns that emerged for both teachers were then compared to each other allowing for additional between-interview and between-participant analysis.

At the conclusion of the two initial case study analysis, determining who was responsible for students with special educational needs emerged as a dominant theme. Therefore, the broad structure of themes and sub-themes was re-examined and re-organized into a framework based on responsibility for students with special educational needs.

Major findings
It was evident that the five teachers' initial interviews differed in the extent to which the teachers saw themselves as responsible for meeting the needs of their students with special educational needs. This variable was later shown to be predictive of the degree to which the teachers made progress by the second interview. Progress in teachers' professional growth was marked by increased competencies i.e. depth, scope and complexity of the accommodations they described their use of IEPs as working documents and as collaborative tools, how and when they drew on resources beyond the classroom to supplement instructional opportunities for students, and whether and how they coordinated...
their instruction with remedial and supplementary programmes. Collaboration with programme support teachers and parents differed markedly across the group of teachers, although in the case of one teacher this may not have been related to beliefs about inclusive education since he described his teaching philosophy as focusing exclusively on the development of student self esteem.

One key purpose of this investigation was to identify patterns in the beliefs that teachers held about students with special educational needs, about their roles and responsibilities in teaching these students, and in their descriptions of their practices in working with these students. In light of the fact that they taught in a school board that supports inclusive education, it was hoped that teacher participants would demonstrate a shift towards describing more inclusive teaching practices.

Three variations of the responsibility theme emerged from the teacher data: teachers who consistently viewed the responsibility for remediation of students with special educational needs as being with the students themselves, the family, or other school support staff; teachers who believed that the students were their responsibility and that they needed to find ways of supporting the struggling students; and finally teachers who viewed "the system" as being responsible for these students.

There was preponderance for three of the teachers in this study to assign blame to the students who were not successful. These beliefs, in keeping with the language presented in the literature, were therefore referred to as pathognomonic beliefs. These teachers shared characteristics in their descriptions of practice and are therefore presented here as a group. All three teachers discounted the value of students' IEPs and they did not consult IEPs for planning purposes. They also consistently described how they implemented routine (low effort) accommodations. Two of the three teachers assigned parents as the main implementers of remedial techniques. In addition, these three teachers' transcripts were marked by their lack of collaboration with staff, Programme Support, Educational Assistants and parents. When the longitudinal data was considered, the three teachers who held these pathologizing beliefs did not describe beliefs or practices that change very much over time. They may have provided somewhat richer descriptions of the
accommodations that they implemented at the time of the second interview, but they continued to hold the students who were not learning responsible for their lack of progress and primarily ascribed them as having motivational problems.

STUDY 5

"A study on teachers’ competencies and their effects on students attitude" (Firat A. 2006)94

Adequately defining the students’ perceptions about teachers has been at the core of much research and controversy for many years. The present study administered a questionnaire in the Turkish mono-lingual setting and was done as an extension of earlier studies to provide feedback to Turkish teachers. A total of 181 9, 10, 11 grade students attending four different state schools answered a questionnaire and three open-ended questions aimed at assessing their attitude towards their perceptions of teachers’ competencies (professional, pedagogical, and personal), as well as learning. The results might illuminate the ways of reaching at a better learning atmosphere through self-assured and self-esteemmed students.

Objectives of the study

The present study was designed to investigate students’ self-reported beliefs with a data collection package (henceforth DCP) designed to assess students’ attitudes towards teachers and learning. The study examined a questionnaire and three open-ended questions included in the DCP concerning teachers’ competencies, students’ beliefs about teachers’ attitudes, their self-reported practices, and the relations between their self-reported beliefs about teachers’ attitudes.

Method of the study

The participants were 181 (140 females; 40 males) high school pupils enrolled in 4 different state schools in two provinces of Turkey. The views of 181 pupils, 9, 10, and 11 graders of high schools have been surveyed through the DCP. Their ages ranged from 16 to 18 years old. Six schools were asked to participate in the study. Letters taken from the Directorate of National Education and phone calls were used to encourage school participation. Four schools out of six participated in the small scaled cross-school project.
The teacher questionnaire (TQ) was developed out of an existing literacy survey (Zamorski, 2002; Haydn, 2002) in accordance with the needs of Turkish students. TQ was translated into Turkish. The items on the TQ and other questions were intended to sample students' beliefs and their self-reported practices towards their attitude to Teachers, learning and being in a classroom as direct participants. In addition to assessing students' beliefs, the TQ and other questions needed to have information about school, age of pupils, gender and their ability level in classes, which was achieved through collecting pre-data about students before implementing the data collection package. (e.g., student grades, student participation during class-time). Prior to distribution of the data collection package, five high school teachers reviewed the instruments and offered suggestions about content and format. The survey was revised accordingly. The DCP contains two sections: (a) TQ (b) Open-ended questions: what are the things that most put you off being in the classroom /learning a subject? - What are the things which most make you feel OK about being in the classroom/learning a subject? – Is there any other comment you would like to make about teachers, lessons, and how you are taught at school in general?

Procedure

The Directorate of National Education provided a contact list for English Division classes of state schools. All participating students received a letter requesting their cooperation prior to the administration. Because the TQ included students' evaluation of their teachers, the confidentiality of the responses was ensured. Data collection packages were distributed to the teachers in 4 high schools and the administration process began in the morning with a preliminary speech addressed to the participants and continued till the lunch break, 22nd of May, 2004.

A list of 'teachers' competencies was adapted and arranged, which was a mixture of: Technical/pedagogical capability, (e.g. "Explains things well", "Controls the class well"), professional qualities (e.g. "Marks and returns your work promptly", "Always seems well prepared"), and teachers' competencies, which might also be defined as a teacher's 'style' of teaching (e.g. "Is friendly", "Says hello or nods to you outside the lesson"). The pupils were asked to circle the items on TQ. Students indicated the extent to which they agreed or
disagreed with the statement using a 4-point Likert-type scale. The scale was anchored at one end by unimportant and at the other end by essential, meaning that a high score indicated strong endorsement of the item.

Analysis of data

In order to fulfill the stated goals of this study, the items were analyzed by using factor analytic methods. The internal consistency reliability of the scale, assessed by Cronbach $\alpha$, was found to be 0.85. Given that Cronbach $\alpha$ is dependent upon the number of a scale it contains, this reliability coefficient is highly acceptable (Backhouse, Dickins, Rayner & Wood, 1982). At first hand, the responses given by the students to TQ were factor analyzed and gathered under 3 subgroups (dimensions). Since factor analyzing the input displayed that the items available in TQ were to be put into three subgroups namely, pedagogical, personal, and professional, the specifically obtained factors (dimensions) were named as the results displayed. The distributions of the scorings that students marked were taken into consideration as descriptive findings. Additionally, variance analysis was used to test the gender and grade differences of students' scorings. At the final stage, subgroups obtained from factor analysis procedure were tested with Multi-Dimensional Scaling method of SPSS. Apart from TQ, open-ended questions that revealed students' views were included in the analysis as a case study.

Major findings

The combined student data from DCP indicated that pedagogical and personal scores of students were the top rated findings. Contrary to the expectations, overall student responses to the teachers' competencies were significantly lower than the two other factors. Discrepancies among the three subgroups might be attributable to the institutions' and teachers' different missions and purposes as well as students' point of views. Additionally, there are factors that may restrict the generalize ability of these findings at first sight: the majority of the sample consisted of female students, but a minority was male. Yet the general atmosphere in Turkey proves that in English division classes these findings may represent other counterparts since the male population in such classes is fairly low.

Although the research reported here did not look directly at gender differences in student perceptions of teachers' competencies, research by Smith and her associates...
(1994) did. They found female students were more sensitive to the interpersonal characteristics of their teachers' competencies. The findings obtained in this study confirmed the previous research in this respect, whereas the findings of previous research conducted by Smith (1994) asserted that male students were more sensitive to whether their professors were knowledgeable and had a good sense of humor. Also, there is suggestion in the literature that female students tend to emphasize interpersonal and social competencies in teachers more than male students do (Smith, Medendorp, Ranck, Morrison, and Kopfman, 1994). Further research is necessary to determine how significant these gender differences are. If gender differences are significant issues in students' perception of their teachers, these styles may have to be tailored more effectively along appropriate dimensions in schools that have different gender ratios to produce more effective learning.

As well as differences between schools, subjects, and gender, in some cases there are significant differences according to the age and grade of pupils— as they get older, different things are important to them. Although 'dresses up smartly' is fairly constant between all age groups, with other characteristics there is a much wider variation. For instance, 'is very rarely absent from lessons' to 11 graders displays that it is not as much important as to 9 graders. This finding exhibits a great contradiction to the previous research. Similarly, the item 'knows their subject really well' to 11 graders tends to ascend in year 10 ratings. Perhaps, this much discrepancy between these three grades seems to bare a great contradiction to the previously conducted studies, but we should make it clear that this study was done in Turkish setting.

At the end of the analysis procedures, it was apparent that the participants of this study including 181 students totally from 9, 10, and 11 grades highly agreed with the objectives of this study. This study stemmed from a 'need' that although there were clearly 'subject' factors involved, we should bear in mind that 'school' factors, and 'teaching methods' factors and largely teachers' 'personal factors' had an important influence on pupils' attitude towards learning. Indeed, when you look at the data gathered through all the sections, it is not difficult to conclude who the teacher is, and what they are like as a person are one of the most essential determinants on attitudes to learning for many pupils, i.e. the
teacher as 'a rational human being', along with the teacher's technical or pedagogical competence.

Study 6

"A study of teachers' competencies development" (Derin Atay. 2006)

This study describes the design and results of a descriptive and explorative case study into the development of professional knowledge by pre- and in-service teachers through collaborative research in English as a Foreign Language (EFL) setting. Studies have shown that teacher research has a profound effect on those who have done it, in some cases transforming classrooms and schools.

Objectives of the study

This study aimed to find out the perspectives of Turkish in-service and pre-service teachers regarding the effects collaborative action research on their professional competence.

Sample of the study

Six volunteer experienced, in-service teachers (ITs) and six prospective, pre-service teachers (PTs) participated in this study. All participants were native speakers of Turkish. The ITs, five females and one male, were teachers at the English preparatory school attached to a highly competitive state university in Istanbul, Turkey. None had ever carried out any research. Their average age was slightly over 29, and they had an average of 5.4 years experience of teaching. Two ITs had degree work in English language teaching and the others had degree work in English language and literature. Three ITs were teaching elementary level English and three were teaching intermediate level classes. All of them taught English for fifteen contact hours per week, considered a full-time load.

The PTs were fourth-year students enrolled at the Department of English Language Education of the parent university. At the time of the study, 179 PTs were enrolled in the department. Out of 34 PTs who volunteered to participate in this study, 6 were selected on the basis that they all aimed to apply for employment at the attached university prep school after graduation. The PTs, 4 females and 2 males, had an average age of 21. In the four-year teacher education programme, the PTs had one research writing course. Moreover, in
one of their methodology courses they had to do research on teaching young English learners in Turkey. However, most of the research was limited to writing literature review as only a few PTs could get permission to interview teachers and to give questionnaires to young learners. My role in this project was as a teacher trainer. I was working in the same department with the PTs, so they had regular access to me. I also provided the ITs with the INSET programme on research and guided them through their research process.

Tool used in the study

Data came from three main sources: informal talks with ITs, journals kept by the PTs, and my field notes. As the participating teachers did not want to do any writing, and were keen to reflect through collegial dialogues, I decided to meet each of them regularly, either in groups or individually, to discuss the process. I tape-recorded and transcribed these talks. PTs were asked to record the research process, and their thoughts about it in their journals, writing a minimum of one entry per week. Borg (2001) has illustrated the value of journal writing as a tool to support the development of research skills. In this study, PTs' reflective writing in journals provided me with insight into the personal and implicit processes that they experienced in their research process. I also kept field notes, which included my thoughts and observations I recorded during my visits each week. These notes helped me to document the process of research and collaboration.

As is typical in qualitative research, an inductive analysis of the data was adopted so that themes emerged from the data. To begin I read the entire corpus and identified only the themes that illustrated the effects of participation in research on the professional competence of the participants. After identifying the themes, I read the data again to extract segments from the texts that illustrated each theme.

Major findings

It has been found to facilitate teachers' critical thought, boost teachers' self-esteem, and increase their awareness of students' needs. Yet, it has been observed that neither pre- nor in-service teachers of English can do much research in Turkey. The main reason is that pre-service teachers generally cannot get permission from schools for research, and in-service teachers do not have sufficient time and training to conduct research. Thus, the impetus for this study came from the belief that if pre- and in-service teachers are
encouraged to collaborate for research, both parties will benefit. Ten pre-service and ten in-service teachers participated in this study. After being provided with relevant theoretical knowledge on research, they collaborated and conducted their research in in-service teachers' classes. It was found that participating in collaborative action research gave teachers from both groups a framework for systematically observing, evaluating, and reflecting on their L2 teaching practices. They also gained an understanding of the importance of collaboration.

The findings indicate that participating in collaborative research had a positive impact on the professional development of ITs by broadening their perceptions of research, helping them recognize the value of collaboration, and encouraging them to implement new instructional practices. During the research process, the PTs and ITSs came together for a shared purpose and drew upon each other's energies and efforts. Engaging in activities involving new areas of inquiry seemed to move them to become a discourse community of their own with ways of understanding common problems and potential solutions.

Study 7

"A study of the teachers' competencies in Korea" (Kwang-Hee Chung. 2007)

Objective of the study

The purpose of the study is to analyze the teachers' competencies and to make clear the effective factors that define professionalism among teachers. This study is comprised of four parts; 1) Search for theoretical basis of competencies commitment, 2) Determining teacher's competencies commitment and excavating its effective factors by interviewing teachers having high competencies commitment, 3) Relationship between the teacher's competencies commitment and its effective factor, 4) Suggestion for enhancing competencies commitment of teachers.

Research design and tool used

Qualitative research methods were mainly used and various methodologies to complement the method were used, for it was necessary to disclose actual logics and teachers for the development of competencies commitment, morale, and expertise of teachers. Specifically, to provide theoretical basis including the concept of teacher's competencies, a study of documents was conducted; an in-depth interview was performed...
to reveal the actual logics and the teachers' competencies situation; a survey to verify the authenticity of the traits of competencies and influential factors that had been disclosed through in-depth interview was performed; and six rounds of expert committee were held to get advice in research scheme, progress, and evaluation process.

Sample of the study

In this study, in order to analyze the traits of teachers' competencies and the influential factors, 48 teachers, among the 144 teachers chosen on the recommendation of municipal and district Office of Education, were chosen for in-depth interviews. As a result of analysis through in-depth interview on traits of highly professional teachers, 80 commitment traits were drawn from 3 fields (areas of individual, organizational, and performance of duties) 9 realms (areas of humanity, view on education, interpersonal relations, performance of duties, teaching guidance, guidance, management of class, performance of school administrative affairs, and development of expertise). Also, 23 factors were drawn for influential factors for teachers' commitment. The influential factors are classified into individual factors of teacher and environmental factors; the six individual factors of teacher include: (1) Enthusiasm for the teaching profession, (2) humanity of the teacher, (3) confidence in teaching and teaching course (4) teaching experience, (5) family and physical factor (6) a role model.

The seven environmental factors include: (1) school administrator, (2) interpersonal factor, (3) performance of duties, (4) development of expertise, or learning opportunities, (5) successful experience, (6) promotion system and incentives, and (7) socioeconomic background of student.

Regarding the 80 traits of teachers, competencies, and the 24 influential factors drawn from the analysis of the interview, a survey was executed to verify the reliability of contents. In case of teacher commitment's trait, reflecting the result of the survey, among the 80 teacher commitment's traits initially presented, the targets of investigation showed generally high consent in 51 traits (above 4.5 in average), and higher consent was shown in 23 traits (above 4.5 in average). After process of retest on the contents, five final categories were put in order. The five traits of teacher commitment shown in professional teachers of Korea are: (1) The grace to perform teaching duty (including view on education, view on
teaching profession, view on children, (love and passion), (2) The ability of teaching (efficiency of teaching) (including preparation for class, reconstruction of content, teaching inducing motivation for study, passion towards teaching subject, etc.), (3) Interpersonal relationship and partnership (relationship with students, teachers, school administrator, parents of students) (including consideration of others, respect, sacrifice, etc.), (4) Problem solving ability or ability to execute tasks (including high motivation for accomplishment, responsibility, cooperation, driving force, creativity, etc). (5) Self improvement or self reflection ability (including self-examination, effort for research, will for training, investigation ability, etc.)

Major findings

In a result of survey on influential factors of teachers' competencies commitment, while influential factors drawn from the analysis result of interview were 33, 14 factors drawn from survey showed consent level of above average. Among them, 'a will for autonomous enthusiasm, and efforts' and 'change in students' showed highest consent levels; in addition, 'pride and self-respect of teacher' appeared to be the most influential reinforcement factor. As a result, from the interview and result of investigation, a general understanding that not external factors but the inner stimulation and motivation of a teacher are most influential factors in teacher's competencies commitment, is confirmed.

Following proposals were suggested to raise teachers' competencies commitment of teaching profession and to invigorate teachers' society, based on the result of study for teachers' competencies traits and influential factors. First, an establishment of policy for teachers from comprehensive viewpoint including future visions is necessary. It became evident that teacher's competencies commitment is not merely an individual issue but is connected to overall education and society. Therefore, more synthetic and comprehensive approach is needed for teacher's competencies commitment. Second, in stages of training teachers, an improvement in programme for training of teachers should be made so that future teachers may have view on education, and a sense of duty. Third, as publicly known, it was verified again that school administrators were very influential in teachers' competencies commitment. Therefore, promotion of plans for cultivating leadership of school administrators is necessary. Fourth, in this study, accordingly to the analysis on traits
and influential factors of professional teachers, well-grounded knowledge and literacy (commitment) in teaching are very important. Therefore, developing teaching methods for education for teachers, as well as specific efforts to reflect such plan in selection of teachers, is required. Fifth, according to the result of the research, training was verified to be a very important factor in maintaining and reinforcing the commitment and educational enthusiasm of teachers. Future training for teachers should reflect various and diverse requirements and circumstances of teachers, so that limitations of time and places for teachers may be dealt with successfully; flexible operation of training system, such as 'visiting training' is desirable. Particularly, there is a need for development of training programme for each stage of teacher's career that reflects the different influential factors of teacher's career, as was shown in the research. Sixth, as a result of this study, colleague support and cooperation mechanism are crucial for improvement of expertise. Therefore, in order to reinforce teacher's professionalism, a mechanism promoting support and cooperation among teachers such as a mentoring system for improvement of teachers' expertise, interchange of expertise among teachers, activation of small communities of teachers for intellectual stipulation, are needed: Seventh, the unique route of promotion of teacher (administrative post) was verified to be a great obstacle in devotion. Therefore, diversification of promotion paths and practical indemnity system should be arranged. Eighth, autonomy of teacher was a remarkably important factor in teacher's competencies commitment. Therefore in future policies on teachers, a specific plan increasing the autonomy of teachers and self-development opportunities should be included. Lastly, as a result of the research, health of teachers, childbirth and child care of women teachers worked as a long-term stagnation factor for teaching career, or a factor hindering commitment. Reflecting the reality of increasing women teachers, improvement in welfare policy for teachers is necessary.

Study 8

"A Study of Generic Teacher Competencies" (AyGegul Atmaman, General Directorate of Teacher Training. Gazi University: 2007)

This study was prepared under the coordination of General Directorate of Teacher Training during meetings and workshops with participation of many experts and teachers is one of the most significant studies as it serves for the development of teacher's status who
is considered among the corner stones of education. Generic competencies consist of six main competencies, "Personal and Professional Values-Professional Development", "Knowing the Student", "Learning and Teaching Process", "Monitoring and Evaluation of Learning and Development", "School-Family and Society Relationships", "Knowledge of Curriculum and Content", 31 sub-competencies and 233 performance indicators. These competencies were proved very useful in terms of identifying task definitions of teachers and setting clear objectives for their personal and professional development. "Generic Teacher Competencies" was a study performed on the basis of scientific methods, and the study was the outcome of an understanding that has a significant role not only in teacher development but also in quality improvement of students, parents, school and thus the education system in general. Teachers, who have long been waiting to attain the status they deserve, were contributed more to the progress of schools and learning by developing their perception of change and management skills through practices to be conducted in the field as a result of these studies.

Activities are being carried out with a holistic understanding under headings of "Developing Curricula", "Preparation of Teacher Competencies", "Developing physical environment and teaching technologies of schools" which are included within "Education Reform" which has been prepared to "Increase quality of student learning" and "Improve teacher status" within the context of National and Contemporary values by Ministry. Teachers have to implement the new curricula developed by our Ministry for efficient teaching and learning and prepare students for the next century. Thus, teacher competencies consist of knowledge, skills and attitudes that teachers should have for attaining these objectives. Within this regard, teacher competencies constitute the second most important stage of the education reform for supporting the curriculum approach prepared in accordance with the latest developments in pedagogical theories and applications by the Ministry. "Teacher competencies" is a document which states transformations to be implemented with a holistic approach in; Identifying policies for teacher training, Pre-service teacher training programmes of institutions of higher education for teacher training, In-service training of teachers, School-Based Professional Development of Teachers, Selection of teachers, Evaluation of teacher performances, Self-knowledge and self-development of
teachers. It will function as a guide by ensuring harmonisation of all future activities in these fields. These competencies discuss gradually complicating status of modern education, training and learning systems and clarify the ways leading to a certain competency in a period of multi-dimensional and quick changes, increasing uncertainties, increasing competition and globalization in all areas, increasing opportunities and risks for individuals, organization and nations. It is expected that Teacher Competencies provide a common understanding and consensus of objective among the Ministry of National Education, Board of Higher Education, Institutions of Higher Education for Teacher Training, Non-Governmental Organizations, Democratic Organizations, Teachers, Parents and all sections of the society. Therefore, it is also expected to create a basis for utmost utilization of all mentioned stakeholders' potentials with regard to education, training, teaching and quality of teachers. I would like to thank all who put effort for preparation of "Generic Teacher Competencies", consisting of 6 main competencies, 31 sub-competencies and 233 performance indicators, which have been tested by stakeholder opinions and current status surveys during an intense and meticulous working process and developed in accordance with opinions, suggestions and criticism of 49 institutions of higher education for teacher training through the Board of Higher Education. I wish our teachers success in their studies based on competencies.

STUDY 9

"A study of teachers' competencies standards: The case of Turkish teacher candidates" (Suleyman Sadi Seferoglu. 2007)

Objectives of the study

The purpose of this study was two fold:

1. To investigate the extent to which teacher candidates believe they possess the teachers' competencies specified by the Ministry of Education.

2. To examine their departments' contribution in acquiring those competencies.

Sample of the study

The study was conducted with 163 senior year students from several departments in Faculty of Education in Ankara, Turkey i.e. the students from department of Computer Education and Instructional technology, Early childhood, Elementary education, Science
education, Mathematics education. Those students have already finished their student teaching practices. Therefore they can be the teacher candidates. In addition, during their four years of study they have examined different aspects of teaching and what teaching is all about. Thus, they can evaluate their future performances and their levels in terms of teaching competencies. The distribution of the participants in terms of gender shows that 65% of them were female and 35% were male.

Tool used in the study

The teaching competencies developed by a commission in MONE consisted of three main categories including: instructional competencies”, “general social-cultural knowledge and skills”, and “field-specific knowledge and skills”. There were 14 categories with 206 competency items in the tool. This tool included 4 points Likert scale with 0.98 reliability coefficient. The participants were asked to evaluate their own competencies with reference to the given items in the instrument using a scale ranging from “poor” to “excellent”.

Variables of the study

1. Independent variable
   1.1 Sex (male and female)
   1.2 Department (department of Computer Education and Instructional technology, Early childhood, Elementary education, Science education, Mathematics education)

Analysis of data

The data were analyzed by SPSS statistical package. For every teaching competency, in 14 competency categories, percentages and means were calculated; t-test and one way ANOVA tests were conducted to look for significant relationship between competency scores and different variables such as candidates' gender and department.

Major findings

The findings indicated that in most of the competency area, students find themselves “good” or “excellent”. The participants’ evaluation of their competencies do not show any significant differences based on gender, but the department.

Findings are presented under the following 14 teachers’ competencies categories:

1. School improvement
2. Knowing the students
3. Planning the instruction
4. Material development
5. Developing school environment relations
6. Managing the instruction
7. Measurement and evaluation
8. Guidance
9. Developing basic skills
10. Helping the students with special needs
11. Teaching adults
12. After school activities
13. Personal development
14. School improvement

Study 10

"A Study of Master Online Teachers' Competencies" (Virgil E. Varvel Jr.: 2007)

Online education continues to flourish across the globe. As we pass from the early adopter phase into acceptance by the masses, the number of instructors taking part in online education grows. In its most basic form, online education is the use of asynchronous (and sometimes synchronous) computer networks in order to instruct students. Although the use of networked information technologies for education dates back to at least the 1960's and PLATO systems, online education began a rapid growth with the advent of visual browsing software and advanced information technologies in the 1990's. Today, online curriculum is flourishing across the globe. Consider that according to the Illinois Virtual Campus (http://www.ivc.illinois.edu), 7168 online course sections were offered in Illinois in the spring/winter of 2006. The California Virtual Campus (http://pdc.cvc.edu/common/) likewise had greater than 9000 courses offered in the 2003-2004 school year. In some cases the demand may even be exceeding course availability. Many reasons for this growth can be postulated as extensions from the need for distance education in general such as the need for quick growth in education system, the demand for courses ahead of resources, the need for additional qualifications, personal fulfillment, and degree
completion. In any case, one item that online education succeeds at is allowing for an instructional interaction previously difficult to obtain or unavailable in distance education. With this interaction possibility, online instruction usually includes the creation of an effective learning environment through mediated activities and/or materials dispersal. These are not easy tasks or responsibilities, but numerous researchers have demonstrated that online instruction can be effective and of high quality. Despite the educational need and growth as well as the reported successes, distance education is still looked down upon as less than equal to its face-to-face counterpart. Items such as educational effectiveness, camaraderie among students, and other factors considered a common aspect of traditional education, whether actually present or not, are questioned in distance education. As an answer to these and other points, numerous benchmarks have been developed to measure the successes and failures of online education from an administrative, student, instructor, or support perspective. Effective use of the Internet to extend the educational experience beyond the limitations of both time and space while maintaining interactivity and high quality instruction has begun to overcome many perceived limitations of the medium.

Just as a quality course is important, quality instruction is also important. Although no accurate statistics exist for the number of instructors currently teaching online courses, a conservative estimate would place the number at over 50,000 in the United States. Most of these instructors have no formal education training, relying primarily on experience both as a student and face-to-face instructor. While perhaps not the ideal situation, clearly there are many quality courses being taught by quality faculty having only this traditional experiential knowledge. Usually though, neither of these experiences exists in the online context as one moves into online instruction, leaving one to ask, just how ready are instructors for teaching online. Furthermore, the technology surrounding online education keeps changing so rapidly, that this readiness may be in a state of flux.

As an online faculty development programme, the Making the Virtual Classroom a Reality programme is concerned with producing quality online instructors who meet this readiness state. One step in such an activity is to define exactly what a quality instructor is and then devise a programme that can produce such a state in an individual. This paper represents the first step in that process. Herein, the competencies required or at least
recommended for a quality online instructor are discerned.

In the formulation of a definition for competency in this study, numerous resources were utilized. Various lexical definitions (American Heritage Publishing Company, 2000; Merriam-Webster, 1997; Miller, 2006; MSN, 2006) were considered along with implied definitions among the various competency documents referenced in this report. A one-hour brainstorming session among Illinois educational faculty was conducted at the 2006 Illinois Faculty Summer Institute at which the definition of competency was discussed. Once all of the sources had been compiled and carefully considered, a definition that expressed the intent of competency in an online education setting was generated. Instructors within the MVCR programme then commented on the tentative definition before a final version was accepted. Herein, competency will refer to appropriate prior knowledge, skills, attitudes, and abilities in a given context that adjust and develop with time and needs in order to effectively and efficiently accomplish a task and that are measured against a minimum standard. The task under consideration is that of a teacher in an online classroom context. It is more than simply an alignment to a competency document. The document is only a guide laying out the knowledge, skills, attitudes, and abilities expected in a competent instructor. To be competent is not the awareness, the attainment, or even the knowledge of the various attributes within the document, although all of these play a part. To be competent is the juxtaposition of this knowledge with the application of that knowledge in a teaching practice. In other words, a competent individual is one who effectively and efficiently accomplishes a task [instructs] in a given context [digital distance education] using appropriate knowledge, skills, attitudes, and abilities that have adjusted and developed with time and needs. These individuals are who is sought after for instructing online courses.

**Purposes of a Competency Document**

In some way, the knowledge, skills, attitudes, abilities, etc. that comprise a competent online instructor need to be articulated and organized into a competency document in order to assess one's competence in the given context. In other words, it is one thing to say that an individual is competent, while it is another thing to say that an individual possesses a given set of skills as determined in a given way. For this purpose, an
organized representation of criteria for competence needs to be developed. The first purpose of a competency document is therefore to define in functional and, when appropriate, observable terms the abilities and expectations of one labeled as competent.

A competency model can serve many additional purposes. The first purpose above may seem self-evident, but several additional reasons exist for the value and purpose of a competency document that may not be recognized at first glance. For example, few online educational systems move beyond the axiomatic acceptance that their instructors are competent and provide documentation of their interpretation of competency and the criteria under which competency is assigned to parties within that system. By providing such information, the institution speaks to the quality of the programme, its instructors, and any courses offered. The expectations of an administration become clear to present and potential instructors. Furthermore, the expectations that a prospective student can have of instructors and in some ways the courses they teach are spelled out. In a way, the quality of the programme and its instructors can be advertised through competency models.

Another purpose for a competency document is to help instructors lay out a professional development plan. In other words, it is not so much intended as a test of whether one is or is not competent, but rather a listing of goals for which one can strive to increase one's competency over time. The document provides instructors with attainable goals in their lifelong learning plans.

With such a prospect, another purpose reveals itself. Not only can a competency document serve as a guide for faculty, it can serve as a guide for those charged with providing faculty development services. If an analysis of faculty shows a given skill set is lacking, then that skill set should be developed. Essential learning objectives geared to achieve a core level of competency among participants can be used to design a faculty development programme. Courses within the programme can be designed to insure that all appropriate competencies are developed by the programme.

Major Findings
From the study it was found that there were 7 competencies of teachers i.e.
(1) Administrative roles (System, Ethical and Issues)
(2) Personal roles (Personal Qualities and Characteristics)
(3) Technological roles (Technology Knowledge and Abilities)

(4) Instructional design roles (Instructional design process, Knowledge, and Abilities)

(5) Pedagogical roles (Teaching process, Knowledge, and Abilities)

(6) Assessment roles (Assessing student learning and Abilities)

(7) Social process and Presence (Social roles)


19. Ibid.


49. Ibid.


82. Ibid.


85. Ibid.

86. Ibid.


