CHAPTER 1
INTRODUCTION

1.1 General

The progress of a nation largely depends on education, a process which involves teacher and taught. According to Radhakrishnan (1984) “It is through the teaching profession that we attempt to mold the minds and hearts of the younger people and make them fit citizens for the community which we wish to build.” The backbone of teaching profession is teacher, especially those who have character, commitment and competency. So, teachers are undoubtedly the most significant factors which make them reputed persons in the society. The International Commission on Education for 21st century (1996) has emphasized on the development of teacher, because the teacher has been regarded as the most vital factor in the system of education. In the words of Education Commission (1964-66), “of all the different factors which influence the quality of education and contribution to national development; the quality, competence and character of teachers are undoubtedly the most significant.” There is ample substance in the often repeated statement of National Policy of Education (NPE-1986) that no society can rise above the level of its teachers. The level of teachers, no doubt, depends on several factors but the professional competence and motivation are most important determinants of their level.

Teachers will be able to fulfill the educational purpose of teaching if they are well prepared for their profession. In the light of this, teacher trainees must be trained to enrich with knowledge, skills and all modern methodologies of teaching. More than this they are required to possess an emotionally and spiritually mature character. That is why the NCTE emphasizes on the need for Competency based commitment oriented teacher education at primary and secondary level.

Morgan (1984) stated that the roots of Competency based teacher education were established in behavioral psychology and learning theories. Chesholim and Donald (1985) demonstrated that Competency based teacher education in behavioral psychology has two dimensions (i) the behavioral dimensions which are based on planning of instructional curricula through determining the behavioral objectives that can shape and mold behavior. (ii) The performance dimension which has to do with determining and measuring performance, inclusive of all skills and experiences necessary for the achievement of teachers’ professional development. According to Bowles (1999) Competency based teacher education describes a teacher training program in which there are specific competencies to acquire with corresponding explicit criteria for assessing these competencies. According to
Arends et al. (1971) there are three criteria - knowledge, performance, and product which are used respectively to assess the student’s cognitive understandings, his teaching behaviour, and his teaching effectiveness.

**Teaching**

Teaching constitutes one of the major tasks of a teacher. Some educationists consider teaching as a broad concept which includes all activities to be carried out for organizing learning experiences. According to traditional concept teaching is the act of imparting instructions to the learners in the classroom situation and the modern concept defines it as to cause the pupil to learn and acquire the desired knowledge, skills and also desirable ways of living in the society.

There are many activities that the teacher has to perform in the classroom and outside it, in order to provide the required learning experiences to students. Some of these are planning for the class, preparing the necessary learning material, giving lecture, conducting a discussion session, giving a demonstration, conducting seminars and supervising practical work etc. All of these comprise teaching activities. And hence, one may say that in teaching the teacher is not only providing instructional experiences, but is also generating a climate conducive for learning. This would mean that 'teaching' will also include maintaining discipline, etc. It is clear from the preceding discussion that teaching is what the teacher performs for the organising of learning experiences as well as for providing the supporting climate necessary for effective learning.

According to Vadillo (2009), “teaching means touching lives to enhance etter life experiences for the individual and his/her community. This implies actively identifying and amplifying talents and fostering their development to full potential. Sometimes it just means staying out of the way so that learners can achieve their goals and other times it requires that we actually facilitate resources and foster experiences so that students can learn, continue learning and love the process.”

**Competency** is a term used extensively by different people in different contexts. So it is defined in different ways. Teacher education and job performance of a teacher are the contexts in which this term is used. Competencies are the requirements of a competency based teacher education, which includes knowledge, skills and values; which the trainee teacher must demonstrate for successful completion of the teacher education programme. Houstan (1987)

**Characteristics of Competency**

A few characteristics of competency are as follows:-
1. A competency consists of one or more skills whose mastery would influence the attainment of the competency.

2. A competency has its linkage with all the three domains i.e. knowledge, skill and attitude under which performance can be assessed.

3. Competencies have a performance dimension, are observable and demonstrable.

4. Since the competencies are observable, they are also measurable. It is possible to assess a competency from the performance of a teacher. It is not necessary that all competencies of a teacher have the same extent of knowledge, skill and attitude. There may be some competencies of a teacher which have the same extent of knowledge, skill and attitude.

There may be some competencies involving more of knowledge than skill and attitude, whereas, some competencies may be skill/performance loaded.

The term competence actually has many meanings as set forth by Johnson (2004) who suggested "Competency as a rational Greenwich satisfactorily meets the performance objectives for a desired condition". Competence is a rational behavior to achieve the purpose required in accordance with the conditions expected. As for the competence of teachers according to McLeod (2004) "the ability of a teacher to responsibly perform her duties or has appropriately". That the competence of teachers is the teacher's ability to implement the obligations in a responsible and viable way.

MSN (2006) defines Competence as an ability to do something, especially measured against a standard.

According to Illinois Faculty Summer Institute (2006), “Competence refers 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.”

In the words of Virgil et al. (2007) a competent individual is one who effectively and efficiently accomplishes a task in a given context using appropriate knowledge, skills, attitudes, and abilities that have adjusted and developed with time and needs.

1.2 Teaching Competence

There are a large number of instructional and related activities to be performed by the teacher inside and outside the classroom. The effective organisation of these activities would require that a teacher must possess a certain amount of knowledge and also certain attitudes and skills. This is known as teacher competence. In other words, teacher competence refers to "the right way of conveying units of knowledge, application and skills to students". The right
way here includes knowledge of content, processes, methods and means of conveying content.

Any definition of teacher competence depends on teaching in a particular setting, the culture and values held in the community. It also depends on the innumerable teacher and student characteristics and the classroom context. Nevertheless, in order to know if we possess the necessary competencies in a given situation, we have to be judged on the basis of our ability to produce certain effects. But, there are so many ways of being effective as there are effects. Moreover, there could be disagreement even amongst ourselves over the effects that a teacher is expected to produce.

Competency over teaching task is the essence of a successful educational system. The development of teaching competency among teachers necessitates a clear understanding of the term as well the method for its assessment. With more than half a century of research in this area, there has been no consensus regarding the meaning of the terms ‘teaching’, ‘competence’ and ‘teaching competence’.

The research studies conducted so far, indicate that there does not exist a single set of competencies which all the effective teachers possess or all the ineffective ones lack. In other words, the concept of teacher competence is highly situational one and involves value judgments.

Brophy and Good (1986), and Lanier and Little (1986) expressed that though there is much concern for the determination of competence of teachers, there is little consensus among educators on its definition. This is understandable as fundamental questions like "What is good teaching?", "What constitutes teacher effectiveness?" are hard to define due to the complex nature of teaching as a profession. Short (1985) attempted to clarify the confusion by presenting four different conceptions of competence. Firstly, Competence is taken as behaviour or performance, the doing of particular things independently of purpose or intent. Secondly, competence is taken as command of knowledge or skills, involving choosing and knowing why the choice is appropriate. Thirdly, Competence can be seen as level of capability which has been insufficient through some judicious and public process, and this sufficient indicator may fluctuate since it involves a value judgment. Fourthly, Competence involves the quality of a person or state of being, including more than characteristic behaviours: performance, knowledge, skills, levels of sufficiency, and anything else that may seem relevant, such as intent, or motives, or attitudes, or particular qualities. According to Short, the fourth definition implies that many theories about teacher competence can exist, all of which can be justified.
Teaching competency has been defined by various educationists in different ways. According to Johnson et al. (1974) teaching competency can be divided into several components: (a) the subject component, which refers to instructional objectives or the subject to be taught; (b) the professional component, which relates to the principles, strategies and techniques used to meet the instructional objective; (c) the process component, which contains thought-processing elements that enable the accomplishment of a teaching competency; (d) the adjustment component, which refers to the individual's adaptation of his personal characteristics for the performance of the competency; (e) the attitudes component, which refers to the values and feeling necessary for the performance of a competency; and (f) the professional component, which refers to the observable behavioural element of the performance associated with the teaching competency.

Mathew (1978) defined teaching competency as "the ability of a teacher manifested through a set of overt teacher classroom behaviours which is a resultant of the interaction between the presage and the product variables of teaching within a social setting".

Desai and Despande (1996) viewed that generally teaching competence refers to the teaching performance of the teachers/trainees taking into account the various teaching skills they will be displaying in the classroom. In other words, teaching competency means objective use of various teaching skills in order to bring about desired pupil outcomes.

Glossary of Education (2010) defines Teacher Competence as explicit, demonstrable knowledge and skills necessary for performing the role of teacher.

According to Singh (2009) Teachers’ Competence refers to the set of knowledge, attitudes and belief that teacher possesses in his/her teaching situation. But it differs from the performance and effectiveness of a teacher. It is a stable characteristic of a teacher that does not change appreciably when the teacher moves from one situation to another. So, a competent teacher is the teacher who has the skill of accurate perceptions of the classroom situations and the changes that occur within the classroom and he/she should possess the personality skills which allow him to adjust in the changing situations and students’ learning is the process that gains the knowledge for children in their set of core of activities in which a teacher assigns tasks to them to evaluate and compares the quality of their works.

According to British Council (2010) Teaching Competency refers to knowledge of concept/skills/language system and the ability to communicate this knowledge effectively and in ways appropriate to the learners and type of course being delivered.

Freiberg et al. (1987) concluded that competencies are the requirements of a competency based teacher education which includes knowledge, skills and values that trainee
teacher must demonstrate for successful completion of the teacher education programme. Teacher Competency mainly involves two major roles on the part of the teacher in the classroom: to create the conditions under which learning can take place that is the social side of teaching and to impart by a variety of means, “knowledge” to their learners. The former we could term as enabling or management function and the later the instructional function. Both complement each other and it is very difficult to separate them. Thus, teaching competence is a crucial component which has significant implications while the instructional process is organized. It has various dimensions such as content knowledge, instructional planning, student motivation, presentation and communication skills, evaluation competencies and classroom management skills.

The main aim of education is to make students learn effectively and efficiently. A teacher has to do several activities such as plan properly, provide effective instructions and evaluate the learning by using appropriate methods and techniques. That means, a teacher has to perform a host of activities inside and outside the classroom. Effectiveness or ineffectiveness of teaching is closely linked to teacher competence. Competent teacher would also create classroom conditions and climate, which are conducive for student learning. Egyankosh discussed following repertoire of teaching competence:-

**Repertoire of teaching competencies**

*Knowledge of Subject Matter:* Adequate knowledge in the content areas would be essential for any teacher to perform competently. The acquisition of knowledge and understanding of any subject would not be just a matter of collecting facts and information about the subject, more importantly; it is learning to think in a way that is characteristic of that discipline. For example, a teacher of Physics expects knowledge about the physical world or arrives at generalizations regarding the physical phenomena not by authority of another person or a book but by a verification process, which is typical of way in which the knowledge in Physics is built. Also, the knowledge, thus, acquired are organized conceptually to provide a conceptual structure to the discipline of Physics, which is coherent and stable. Furthermore, the way a teacher handles a subject or a discipline is influenced by his/her beliefs and attitudes with regard to the subject. Researchers have identified two basic types of teachers. These are not absolute opposites but are persons with tendencies towards one extreme or the other.

**Planning:** Teachers' planning refers to that aspect of teaching where teachers formulate a course of action. It is an activity that is typically carried out in the absence of students and before the actual teaching. Teachers' plans, which serve as 'scripts' (whether they are done on
paper or in one's mind), include decisions on what to teach and how to teach the chosen content.

Long range planning or planning for a semester or a year, may not involve deciding what to teach if the course of study is prescribed for a given level. But even here, it would still involve deciding what to teach first, and what next and also planning for other supplementary activities that might act as a 'bridge' or a "gap-filling exercise". It also includes some kind of (probably an informal) assessment of what students come to teachers for. This may not uniformly relate to the entire class.

**Motivation:** Even when the plan is good, an important function of the teacher in implementing it is to motivate those learners who are demotivated to the task of learning and nurture those who are already well motivated. There are several ways in which one can achieve this: by giving students meaningful, relevant and interesting things to do; by adopting a positive attitude towards learners praising and encouraging the positive efforts by learners; by giving encouraging feedback to their responses to oral questions or written assignments; by involving learners in the classroom activities that demand inter-student communication and co-operative efforts on their part; Teacher Competence in higher education communication skills is by linking the day's lesson with that of the next and also, if possible, to other subjects by drawing from their past experiences and proceeding at a pace that is most suitable to them; by building into the tasks, some amount of flexibility, so that learners with varying abilities and experiences find them challenging enough even while, not frustrating their efforts.

**Presentation and communication:** After ensuring the students' interest in the learning, a teacher in the classroom is to transact with the students in the context of a specific subject matter. The teacher is expected to communicate with the students in a number of ways so that the learners attain various types of learning outcomes. In order to achieve this effectively, the teacher may have to manifest various types of skills including lecturing, explaining, eliciting through questions, conducting discussion, dramatizing, reading, demonstrating using audio-visual aids, etc. All these may be categorised into skills for effective presentation and communication in the instructional situation.

**Evaluation:** Evaluation of the students' achievement of a pre-specified objective is part and parcel of a teacher's function. Preparing question papers, taking viva voce, etc. are included in the evaluation process. But these are only a part of the total evaluation function of a teacher. He has to observe the students in many different situations in order to judge the extent to which the expected terminal behaviours have been actually achieved by them. This includes
so many activities. A teacher has to, first of all, select the suitable techniques and tools of evaluation. It is obvious that one cannot measure the length of a stick by using a weighting machine. Similarly, for measuring the skills of performing experiments, one cannot have a written examination. Hence the teacher has to select the suitable techniques and tools for measurement according to what he would like to measure.

Once the tools are decided on, one has to set about measuring the concerned behaviour. This would give the actual achievement of the terminal behaviour. A teacher should compare the actual terminal behaviour of the students with their expected behaviour. This helps him to judge the extent to which the expected terminal behaviour has been achieved. The gap between the two indicates the areas in which the students have not learnt. The teacher need to make use of this feedback to improve his teaching as well as to provide the necessary remedial help to the students. All these activities mentioned, need competencies on the part of the teacher. It is called Evaluation Competencies.

*Classroom management and discipline:* Instructional process in the class can go on effectively only when there is a healthy and conducive climate in the class. Thus, classroom management becomes a very critical function of a teacher. The teacher has to possess various skills which would help him in managing the class in such a way that a healthy and conducive climate prevails. These skills are so important that, unless a teacher possesses these to a reasonable extent, the teacher will not even be able to stand up or stay for a while in a class to manifest presentation or evaluative skills, however proficient he may be.

**1.3 Human Intelligences**

Human intelligence, mental quality that consists of the abilities to learn from experience, adapt to new situations, understand and handle abstract concepts, and use knowledge to manipulate one’s environment.

Much of the excitement among investigators in the field of intelligence derives from their attempts to determine exactly what intelligence is. Different investigators have emphasized different aspects of intelligence in their definitions. For example, in a 1921 symposium the American psychologists Lewis M. Terman and Edward L. Thorndike differed over the definition of intelligence, Terman stressing the ability to think abstractly and Thorndike emphasizing learning and the ability to give good responses to questions. More recently, however, psychologists have generally agreed that adaptation to the environment is the key to understanding both what intelligence is and what it does. Such adaptation may occur in a variety of settings: a student in school learns the material he needs to know in order to do well in a course; a physician treating a patient with unfamiliar symptoms learns about
the underlying disease; or an artist reworks a painting to convey a more coherent impression. For the most part, adaptation involves making a change in oneself in order to cope more effectively with the environment, but it can also mean changing the environment or finding an entirely new one.

Effective adaptation draws upon a number of cognitive processes, such as perception, learning, memory, reasoning, and problem solving. The main emphasis in a definition of intelligence, then, is that it is not a cognitive or mental process but rather a selective combination of these processes that is purposively directed towards effective adaptation. Thus, the physician who learns about a new disease adapts by perceiving material on the disease in medical literature, learning what the material contains, remembering the crucial aspects that are needed to treat the patient, and then utilizing reason to solve the problem of applying the information to the needs of the patient. Intelligence, in total, has come to be regarded not as a single ability but as an effective drawing together of many abilities. This has not always been obvious to investigators of the subject, however; indeed, much of the history of the field revolves around arguments regarding the nature and abilities that constitute intelligence.

**General Intelligence**

Knowledge aspect of teaching demands minimum essential cognitive abilities. Intelligence is one of such a cognitive ability. It is psychological fact that through knowledge one cannot obtain intelligence, but through intelligence one can obtain dispense knowledge. Hence, theoretically intelligence contributes the teacher’s performance.

At the beginning of the twentieth century, as psychologists discovered ways and means to measure intelligence, Aristotle's definition of man as "a rational animal" developed into an obsession with IQ. Our ‘Intelligence Quotient’ is generally thought of as our analytical or mathematical intelligence and our linguistic intelligence as college entrance exams – verbal and maths components.

Baron (2006) stated that the term intelligence refers to individual’s abilities to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles by careful thought.

Charles Spearman - General Intelligence:

British psychologist Charles Spearman (1863-1945) described a concept he referred as general intelligence, or the *g* factor. In the early 1900's Charles Spearman made an observation that has sense, continued to influence many of today's theories of intelligence. In this observation, Spearman noted that all tests of mental ability are positively correlated.
Spearman discovered that people who score high on IQ or mental ability tests usually scored higher on other types of tests, and people that scored lower generally had lower scores on other tests. He concluded that intelligence is general cognitive ability that could be measured and numerically expressed.

Spearman speculated that if all mental tests are positively correlated there must be some common variable or factor that produces this positive correlation. In 1904 Spearman published an article that used a statistical method to show that the positive correlations among mental tests indeed resulted from a common underlying factor. This method is known as factor analysis. Using factor analysis Spearman believed it would be possible to identify clusters of tests that measure a common ability.

Based on his factor analysis techniques Charles Spearman stated that two factors could directly affect an individual's score on mental tests. He called the first factor the general intelligence or the general factor (MSN Encarta, 2006). The general factor represented what all mental tests have in common. Scores on all of these tests were positively correlated. He believed that this was because all of these tests drew on the general factor. The Second factor Charles Spearman identified was the specific factor. The specific factor related to whatever unique abilities a particular test required so it differed from test to test. Spearman and his followers place much more importance on general intelligence than on the specific factor.

Spearman's model implies that the objectives of psychological testing should be to measure the amount of each individual's 'g' factor. The g-factor runs through all abilities and forms the basis for prediction of the individual's performance. It would be futile to measure specific factor, as each operates in only a single activity. Spearman advocated that the 'g' factor provides a correct picture of intelligence. His model of two-factor theory paved the way for application of factor analysis in psychology. Later, factor analysis was used for discovering cluster of traits, which produced amazing multiple factors.

**Emotional Intelligence**

Researches and experiments conducted in the 90s onwards have tried to challenge over dominance of the intelligence and its measure IQ, by replacing it with the concept of emotional intelligence and its measure EQ. These have revealed that a person’s EQ may be a greater predictor of success than his or her IQ. Our emotional brain is the part where we decide what to pay attention to, the place where long-term memory is stored, and the area where we set priorities.
Though the concept of emotional intelligence gained popularity at the end of the twentieth century, its origin is traced to the traditional philosophical discourses. The idea of emotional intelligence is not purely new. The first known writings about the emotional basis of learning came from Plato. He wrote, “All learning has an emotional base”. What is new, however, is the recognition that the cognitive, emotional and social parts of ourselves are deeply interconnected and interdependent—that our feelings dramatically influence our thinking, that our behaviours are inseparable from our emotions.

- There is no thinking without feeling, no feeling without thinking.
- Action, feeling and thought all affect one another.
- We literally make choices about how we feel.

With earlier researches emotional intelligence is known to have its roots in the various works done to explain and define intelligence. When psychologists began to write and think about intelligence, they focused on cognitive aspects, such as memory and problem solving. However, there were researchers who recognized early on that the non-cognitive aspects were also important. For instance, Robert Thorndike, who saw non-cognitive aspects of intelligence to be important for adaptation and success. Wechsler (1944) defined intelligence as "the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment". As early as 1940 he referred to "non-intellective" as well as "intellective" elements, by which he meant affective, personal and social factors. Furthermore, as early as 1943 Wechsler was proposing that the non-intellective abilities are essential for predicting one’s ability to succeed in life.

Besides Thorndike, unfortunately, the work of these early pioneers was largely forgotten or overlooked until Howard Gardner opened the door to discussion of “multiple intelligences” with his book ‘Frames of Mind’ in 1983. He listed seven different types of intelligences in that book: (1) Linguistic, (2) Logical-mathematical, (3) Musical, (4) Bodily-Kinesthetic, (5) Spatial, (6) interpersonal and (7) Intrapersonal. Gardner’s sixth and seventh intelligences were later combined into the study of “emotional intelligence” by Daniel Goleman and others. Gardner proposed that "intrapersonal" and "interpersonal" intelligences are as important as the type of intelligence typically measured by IQ and related tests.

By the early 1990s, there was a long tradition of research on the role of non-cognitive factors in helping people to succeed in both life and the workplace. The current work on emotional intelligence builds on this foundation.

The term emotional intelligence was introduced in 1990 by two American University professors Dr. John Mayer and Dr. Peter Salovey in their attempt to develop scientific
measure for knowing the differences in people’s ability in the area of emotions. They (1993) described emotional intelligence as "a form of social intelligence that involves the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them, and to use this information to guide one’s thinking and action".

Daniel Goleman's fascinating report from the frontiers of psychology and neuroscience offers us startling new insight into our "two minds"—the rational and the emotional—and how they together shape our destiny. Beginning deep in the brain, emotional intelligence shows us the exact mechanism of an "emotional hijack," when passion overcomes reason.

“What factors are at play, e.g. when people of high IQ flounder and those of modest IQ do surprisingly well? This difference quite often lies in a range of abilities called emotional intelligence, which includes self-control, zeal and persistence and the ability to motivate oneself. These skills as we shall see, can be taught to children, giving them a better chance to use whatever intellectual potential the genetic lottery may have given them” (Goleman, 1995).

EQ is actually a large collection of skills and abilities. Mayer et al. (1997) defined emotional intelligence as the capacity to reason with an emotion in four areas: to perceive emotion, to integrate it in thought, to understand it and to manage it.

Goleman has adapted Salovey and Mayer’s model into his own version. Goleman’s adaptation includes these five basic emotional (personal) and social competencies:


ii) Social Competencies: Empathy, Social skills.
   4. Empathy: Understanding others, developing others, Service orientation, Leveraging, Diversity, Political awareness.
   5. Social skills: Influence, Communication, Conflict management, Leadership, Change catalyst, Building bonds, Collaboration and Cooperation, Team capabilities.

According to Bar-On, “Emotional intelligence is an array of non-cognitive capabilities, competencies, and skills that influence one’s ability to succeed in coping with environmental demands and pressures.” In Bar-On’s (2000) Model of Emotional Intelligence there are five realms along with their sub-sections:

2. The Interpersonal Realm: Empathy, Social responsibility, Interpersonal relationships.


5. General Mood Realm: Happiness, Optimism.

Maulding (2002) suggested the following domains for emotional intelligence: (1) knowing one's emotions; (2) managing one's emotions; (3) motivating oneself; (4) recognizing emotions in others; and (5) handling relationships.

EQ is not the opposite of IQ rather probably overlaps. In fact, there are researches suggesting that emotional and social skills actually help to improve cognitive functioning. Some people are high on both, others are low on either. Researchers have been making efforts to understand how they complement one another; how a person’s ability to handle stress, for instance, affects his/her ability to concentrate and put his/her intelligence to use.

Emotional intelligence allows a person to think divergently and to use emotions to solve problems. Goleman (1995) believes that emotional intelligence appears to be an important set of psychological abilities that relate to success in life. It is empathy and communication skills as well as social and leadership skills that were central to our success in life and personal relationships, rather than a high IQ. Goleman suggested that it is far better to have a high EQ, if we want to be a valued and a productive member of society.

Further, Goleman (1998) argued that men particularly need to develop emotional skills, and he gave many examples of men with high intelligence who were not successful because they had problems with their people’s management skills. He found from his research that people with high emotional intelligence generally have successful relationships with family, friends and follow workers. They are successful because they persist in the face of setbacks and channel their emotional energies towards achieving their goals.

Emotional intelligence is significant for both individuals and society. There is now a considerable body of research suggesting that a person’s ability to perceive, identify, and manage emotions provides the basis for the kinds of social and emotional competencies that are important for success in almost any job. Furthermore, as the pace of change increases and the world of work makes ever-greater demands on a person’s cognitive, emotional and physical resources, this particular set of abilities will become increasingly important.
Spiritual Intelligence

While IQ and EQ are not new, spiritual intelligence is still in its infancy. Zohar et al. (2001) contends that in the early part of the twentieth century IQ, or rational intelligence was the big issue. More recently, emotional intelligence (EQ) has been identified as a requirement for the effective use of IQ. Now there exists much scientific data that points to the presence of spiritual intelligence (SQ), the ultimate intelligence that serves as a necessary foundation for the effective functioning of both IQ and EQ. Now, as we have entered the twentyfirst century, there is growing collective evidence that there is a third ‘Q’--‘SQ’ or Spiritual Intelligence.

The momentary definition of spiritual intelligence is the ability to respond to any given situation through the use of pure intuitive logical thought to empower the best use of our mind/body/spirit. Everything is connected in the holistic view. ‘Pure’ means without resistance; ‘intuitive’ means a person already know the answer/response; ‘logical’ means it has identifiable repetitive patterns; ‘thought’ means that it is a function of the mind. According to Levin (2000) there isn’t any new parcel of knowledge that we have to learn. It is almost as if knowledge or information has little to do with it. But, there is a new approach, a new way of understanding and acting that we must find. It is the approach of spiritual intelligence.

In an interview with Danah Zohar and Dr. Ian Marshall by David Bowman, Zohar (2003) explained that our spirituality is located in the deep self, which is ultimately connected to the ground of reality itself. Physicists would call this the quantum vacuum. Religious people would call it God. Buddhists would call it the soulful being. Even in psychics there is a kind of fundamental reality as the base of things.

It is believed to be a built-in spiritual center located among neural connections in the temporal lobes of the brain. On scans taken with positron emission topography, these neural areas light up whenever research subjects are exposed to discussion of spiritual or religious topics. Neurobiologists have now dubbed the area of the temporal lobes concerned with religious or spiritual experience. It is called the 'God spot' or the 'God module'.

The brain's unitive experience emanates from synchronous 40 Hz neural oscillations that travel across the whole brain. According to Zohar, the 40 Hz oscillations are the neural basis of SQ, a third intelligence that places our actions and experience in a larger context of meaning and value, thus, rendering them more effective. Everything possesses a degree of proto-consciousness but only certain special structures, like brains, have what is needed to generate full-blown consciousness. In this case, conscious human beings have their roots at
the origin of the universe itself. Our spiritual intelligence grounds us in the wider cosmos and life has purpose and meaning within the larger context of cosmic evolutionary processes.

It is the nature of spiritual intelligence that it is difficult to define. One point to make clear is that it is quite separate from organised religion. According to Vaughan (1998) “spiritual intelligence suggests wisdom and compassion; understanding and inner peace; love and freedom; depth and breadth of wisdom”.

Zohar et al. (2001) defined spiritual intelligence as “the intelligence with which we address and solve problems of meaning and value, the intelligence with which we can place our actions and our lives in a wider, richer, meaning-giving context, the intelligence with which we can assess that one course of action or one life-path is more meaningful than another”.

Wolman (2001) defined spiritual intelligence as “the human capacity to ask ultimate questions about the meaning of life, and to simultaneously experience the seamless connection between each of us and the world in which we live.”

According to Kravitz (2002) spiritual intelligence refers to the skills, abilities and behaviours required to develop and maintain a relationship to the ultimate source of all being, succeed in the search for meaning in life, find a moral and ethical path to guide us through life, and act out our sense of meaning and values in our personal life and in our interpersonal relationships.

According to Zohar, Spiritual Intelligence or SQ is not just the last buzzword of the millennium. She argued that SQ is the soul's intelligence. It is the necessary form of intelligence which humans need to access and to use meaning, vision and value. SQ is evident in brain physiology and without it we would lead an existence without meaning. SQ is, therefore, necessary for the effective functioning of both IQ and EQ.

The integration between the rational and emotional states of mind with coherent functionality creates the state of high ‘Spiritual Intelligence’. According to Levin (2000), spiritual maturity, which is the product of spiritual intelligence, is not concerned with holding power over others, or amassing personal wealth, or even benefiting one particular clique (your friends), but rather with the well-being of the universe and all who live there.

According to Lama (2006) by developing spiritual intelligence, a sense of compassion that helps us to be more sensitive, more aware of our own feelings and the feelings of those around us, we become more intuitive; we relate better and love better. Cultivating spiritual intelligence and learning how to connect will improve our capacity for intimacy, making us
better mates, friends, parents and co-workers; it helps all of us to become more giving and brings us fulfilment, meaning and love.

Conscious Pursuits Inc. (CPI) suggested that spiritual intelligence is an innate human intelligence – but like any intelligence it must be developed. This means that we can describe it and measure it by looking at the skills that comprise spiritual intelligence.

1.4 Pre-service Teacher Education

Pre-service Teacher Education is the education and training provided to student teachers before they have undertaken any teaching.

Before entering into any pre-service education most students will have obtained a previous degree in a subject of their choice, (e.g. English, Maths, Science, Religion) either general or honours. During the pre-service education program the pre-service teacher will learn how to use their knowledge to formulate lesson plans to teach their class. Common topics include classroom management, lesson plans and professional development. A major focus during such education programs are the practical where the pre-service teacher is placed within a school setting (either elementary or senior) and shadows an experienced teacher. The pre-service teacher will be given opportunities to develop skills through lesson plans, teaching lessons and classroom management.

A student teacher is a college or graduate student who is teaching under the supervision of a certified teacher in order to qualify for a degree in education. This term is also often used interchangeably with "Pre-Service Teacher." It is a much broader term to include those students that are studying the required coursework in pedagogy, as well as their specialty, but have not entered the supervised teaching portion of their training. In many institutions "Pre-Service Teacher" is the official and preferred title for all education students.

Pupil teacher also used to refer to a senior pupil who acted as a teacher of younger children, which in the 19th and early 20th centuries was a common step on the road to become a professional teacher for intelligent boys and girls of poor background.

There is ample substance in the often repeated statement of National Policy of Education (NPE-1986) that no society can rise above the level of its teachers. The level or status of teachers, no doubt, depends on several factors but the professional competence and motivation are among most important determinants of their level. Teachers’ professional competence in turn depends on the effectiveness of their education and training – both pre-service and in-service.
1.5 Rationale

Shukla (1995) observed that teachers' competence is one of the major influencing factors having an effect on the students' achievement among other school factors. It is believed that in the fast changing world of today, the role of teacher assumes special significance as he or she is considered more instrumental than anybody else in helping the learners and imbuing the right knowledge, values, attitudes, habits and skills necessary to cope with the world of tomorrow. Moreover, the teacher has been recognized as the most important person in accelerating national development. But the extent of performing these tasks more effectively depends largely upon his/her teaching competency (Panda, 2004). In this context Paul (2003) remarked that only a competent teacher can bring out modernization and mobility in the changing and dynamic society. Humayan Kabir has rightly said, "Without good teachers even the best of system is bound to fail, with good teachers, even the defects of a system can be largely overcome". Khalaf (2000)

After viewing related literature it was found that many studies were conducted on teaching competence, teaching competency, teaching effectiveness, teaching efficiency and development of micro skills of teacher and student-teachers. Most of the researches were experimental in nature and conducted in two or three decades back such as of Das (1976), George and Anand (1980), Jangira (1980), Adeshra (1981), Malhotra and Syag (1981), Patel (1978), Mukhopadhyay (1981), Naik (1984), Singh (1984), Thakkar (1985), Francis (1989), Pandya (1991), Clifford (1975), George and Joseph (1978), Kumar and Lal (1980), Jangira et al. (1981), Kaur (1981), Partap (1982), Khan (1985), Kalyanpurkar (1986), Pandian (1987), Bhagia and Bhourasker (1974), Bhouraskar (1978), Das et al. (1980), Syag (1984), Yogendra (1980), Bhattcharjee (1981), Cathley (1984), Dave (1987), Freiberg et al. (1987) and Sharma (2009). Out of these, large number of researchers studied effect of micro teaching on teaching competency at different levels of teacher education. A few researches were found who examined the relationship of teaching competency with cognitive and affective variables by using the descriptive survey method. Most of the studies revealed that micro teaching was an effective technique to improve teaching competency of student-teachers. Cathley (1984) experimentally studied the teaching competency at macro level as a function of training in micro skills among the prospective secondary school teachers in relation to skills and subject area. Yogendra (1980) revealed that there was improvement in general teaching Competence and in teaching skills of probing questions, reinforcement, stimulus variation, illustrating with example, illustrating with aids, increasing pupils’ participation after undergoing training through micro teaching. It was found that micro teaching could go a long way in improving
the general teaching competence of in service teachers if undertaken on a large scale. Further comparative studies showed that micro teaching was more effective technique than conventional method to improve the teaching competence at various levels of teacher education. Some of the studies also reported the positive co-relation between teaching competence and the affective variables. Further it was noted that findings regarding relationship between these variables are inconsistent.

Sixth survey of educational research (1993-2000) reported seven researches out of 97 studies at doctorate level on teaching competency under heading of ‘Teaching Competency’ as shown in table 1.1.

Table 1.1  
**Area wise Number of Studies under the Heading of Teaching Competency**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Area</th>
<th>No. of Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Method of teaching</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>Models of teaching</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>Affective Domain</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Educational Technology</td>
<td>24</td>
</tr>
<tr>
<td>5</td>
<td>Teaching/Learning Problems</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Teaching Competency</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>Curriculum</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Strategies, Approaches</td>
<td>15</td>
</tr>
</tbody>
</table>


Related literature revealed that little work on spiritual intelligence has been conducted due to new construct. Investigator found only a few studies on the same. Bowling (1999) conducted a study to examine the spirituality based on Howard Gardner’s theory of multiple intelligence. Using Gardner’s guidelines, an examination of a candidate spiritual intelligence reveals fascinating possibilities. Kaur (2004) examined the impact of life lessons on emotional and spiritual intelligence of adolescents. No study among these was related directly
or indirectly with Teaching Competence of student-teachers. To fill this gap this effort was done.

Emotional Intelligence is relatively new construct in Educational Psychology. Goleman contended that EQ is major determinant of success in life as well as Education. Researches on this issue showed inconsistent findings. Most researchers reported positively. Stein (2000) revealed that the successful people score significantly higher in emotional quotient than unsuccessful people. Bar-On and Parkar (2000) reported that those who perceive themselves as being more successful score significantly higher on the EQ-1 than those who perceive themselves less successful. Jones (2000) revealed that successful leadership included emotional intelligent behaviour. Bardach (2008) indicated that the association between emotional intelligence and school success could not be ignored and that additional study was strongly indicated. Babu (2008) uncovered that the correlation coefficient between self-esteem and emotional intelligence of science stream students was high among B.Ed. trainees. Brackett and Mayer (2003) found correlations in the 0.28 to 0.45 range between the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) and the “quality of interpersonal relationships”. Brackett and Saloway (2004) described correlations between the MSCEIT and scholastic performance in the 0.20 to 0.25 range. The correlation between the MSCEIT and various aspects of occupational performance ranges between 0.22 and 0.46. Justice and Espinoza (2007) reported that according to the Emotional Intelligence Scale the beginning teacher candidates needed to strengthen skills in assertion, comfort, empathy, decision making, drive strength, time management, commitment, ethic, self-esteem, stress management and deference. The skills of leadership, aggression, and change orientation were current strengths. To face the challenges of a diverse classroom, these skills need to be developed, strengthened or enhanced if candidates were expected to have a longer teaching career.

Panda (2004) studied the prediction of teaching competency from creativity, intelligence and teacher attitude. The results indicated that these predictors did not tend to influence teaching competency with similar effect and that they did have significant multiple correlation with teaching competency. Patra (2004) conducted a study on role of emotional intelligence in educational management and found that emotional intelligence could help in creating an enthusiastic work environment, employee satisfaction, and efficient administration, useful vision for the future and achieving organizational development. Dash and Behera (2004) studied on senior secondary teacher effectiveness in relation to their emotional intelligence and found that there was a positive effect of emotional intelligence on
teacher effectiveness. The teacher effectiveness of various dimensions on differential scale between high and low emotional intelligence teachers were also found positively different. Holt and Jones (2005) examined the concept of emotional intelligence in conjunction with organizational behaviour, education and training for enhanced emotional knowledge within business and academic organizations. The role of an emotional quotient was considered in management effectiveness, together with implications for schools. Kaur and Kaur (2006) showed that the efforts which the teachers were doing were below average. The teachers were doing the efforts maximum on the competency of Interpersonal Realm and a very few on Intrapersonal Realm. And again this percentage was also far below the average. Gultekin (2006) revealed that the attitudes of teacher candidates towards teaching profession were quite positive and their perception levels of teaching competency were very good. Penrose et al. (2007) showed that neither gender nor age moderated the relationship between emotional intelligence and teacher self-efficacy. However, length of teaching experience and current status add significant direct effects on predicting teacher self-efficacy but did not moderate the relationship between emotional intelligence and teacher self-efficacy. These findings were significant as this now demonstrates a relationship between levels of emotional intelligence in teachers, their self-efficacy beliefs and teacher effectiveness. Thangapandian and Prithivikashini (2007) indicated that all the five dimensions of organizational citizenship behaviour i.e. altruism, civic sense, courtesy, conscientiousness and sportsmanship had a significant relationship with emotional intelligence. In general, higher the emotional intelligence higher was the organizational citizenship behaviour. Sameer (2008) reported that the correlation coefficient between self-esteem and emotional intelligence of science stream students was high. Both in self-esteem and emotional intelligence, it was found that there was no significant difference among the students based on stream of study, marital status and age, except in the comparison of them in their self-esteem based on age. Jaiswal and Shukla (2009) found that emotional intelligence and it’s all the dimensions had been affecting scientific creativity of senior secondary students. Lather (2009) found that emotional intelligence enhanced social coping of students.

Smaller number of studies revealed no relation of emotional intelligence with educational phenomenon. Murensky (2000) reported that emotional intelligence was independent of the cognitive abilities of creative thinking. Jaeger (2002) revealed that the improvement in emotional intelligence was not a predictor of six academic successes. Waterhouse (2006) reviewed evidence for multiple intelligences theory, the Mozart effect theory and emotional intelligence theory and argued that despite their wide currency in
education these theories lack adequate empirical support and should not be the basis for educational practice.

Although much research has been done on emotional intelligence but performance of student-teacher was scarcely studied in relation to this construct on student-teachers in Punjab. Finding the importance of emotional intelligence the investigator selected emotional intelligence for the present study. Further some studies found which examined the relation of teaching competence with emotional intelligence but these were not evaluate with respect to general intelligence and spiritual intelligence along with demographic variables such as teaching subjects, age etc. Hence the investigator designed a study of Teaching Competence of student-teacher in relation to emotional intelligence of B.Ed. students. The investigator was interested to study Teaching Competence of student-teacher in relation to spiritual intelligence. In addition general intelligence was also taken so that comprehensive comparison of three major types of intelligence may be made. The study was an attempt to find out the answer of a question that to what extent three Qs are contributing to Teaching Competence of B.Ed. student-teachers.

Findings of the study may be helpful in suggesting better admission basis of student-teachers. These may also provide guidelines for curriculum construction at secondary teacher education.

Due to privatization, quantitative growth of teacher education institutes was observed in Punjab. This trend put a question that whether quantity leads to quality? Teaching Competence of student-teachers was a qualitative aspect of secondary teacher education institution. Present study was an attempt to answer this question.

1.6 Statement

Teaching Competence of Student-teachers in relation to General, Emotional and Spiritual Intelligence

1.7 Operational Definitions of Variables

*Teaching Competence* stands for rating scores by teacher-educators for planning, presentation, closing, evaluation, and managerial aspects of teaching of student-teachers on General Teaching Competence Scale developed by Passi and Lalitha (1978).

*General Intelligence* denotes scores of the student-teachers on Raven Standard Progressive Matrices (SPM revised, 2000) which assess the ability to forge new insights, the ability to discern meaning in confusion, the ability to perceive and the ability to identify relationships.
Emotional Intelligence represents scores of the student-teachers on Bar-On-Emotional Quotient Inventory (1997) which measures ten different components of Emotional Intelligence viz. self-regard, interpersonal relationship, impulse control, problem solving, emotional self-awareness, flexibility, reality testing, stress tolerance, assertiveness and empathy.

Spiritual intelligence refers to scores of the student-teachers on Spiritual intelligence scale by Singh (2008) which measures virtuous, vision & insight, commitment, divinity, compassion, flexibility, gratitude, being holistic, intuition, self-awareness, inquisitive, resilient, mission & servant-leader, value, field independent, and inner peace and contentment.

1.8 Objectives

Following are the objectives of present study:

1. To compare Teaching Competence (total and dimension wise) of student-teachers on the basis of their levels (high, average and low) of General Intelligence.

2. To compare Teaching Competence (total and dimension wise) of student-teachers on the basis of their levels (high, average and low) of Emotional Intelligence.

3. To compare Teaching Competence (total and dimension wise) of student-teachers on the basis of their levels (high, average and low) of Spiritual Intelligence.

4. To compare Teaching Competence (total and dimension wise), General Intelligence, Emotional Intelligence (total and dimension wise) and Spiritual Intelligence (total and dimension wise) on the basis of
   a. Stream (science, social sciences and Languages)
   b. Gender
   c. Residence of student-teachers.

5. To study the influence of various interactions between General Intelligence (high, average and low) and
   a. Stream (science, social sciences and Languages)
   b. Gender
   c. Residence of student-teachers.

6. To study the influence of various interactions between Emotional Intelligence (high, average and low) and
   a. Stream (science, social sciences and Languages)
   b. Gender
   c. Residence of student-teachers.
7. To study the influence of various interactions between Spiritual Intelligence (high, average and low) and
   a. Stream (science, social sciences and Languages)
   b. Gender
   c. Residence of student-teachers.
8. To study the influence of various interactions between General Intelligence (high, average and low) Emotional Intelligence (high, average and low) and Spiritual Intelligence (high, average and low) on Teaching Competence of student-teachers.
9. To find out the correlation between
   a. Teaching Competence (total and dimension wise) and General Intelligence of student-teachers;
   b. Teaching Competence (total and dimension wise) and Emotional Intelligence of student-teachers and
   c. Teaching Competence (total and dimension wise) and Spiritual Intelligence of student-teachers.
10. To find out the correlation between Teaching Competence (total and dimension wise) and
    a. General Intelligence by controlling Emotional and Spiritual Intelligence of student-teachers;
    b. Emotional Intelligence by controlling General and Spiritual Intelligence of student-teachers and
    c. Spiritual Intelligence by controlling General and Emotional Intelligence of student-teachers.
11. To study the joint contribution of General Intelligence, Emotional Intelligence and Spiritual Intelligence for Teaching Competence of student-teachers.
12. To predict Teaching Competence of student-teachers on the basis of General Intelligence, Emotional Intelligence and Spiritual Intelligence of student-teachers.
13. To study the path relationship between General Intelligence, Emotional Intelligence and Spiritual Intelligence for Teaching Competence of student-teachers.
14. To study the factor structure of General Intelligence, Emotional Intelligence and Spiritual Intelligence of student-teachers.

1.9 Hypotheses

Following are the hypotheses of present study:
1. There is no significant difference in Teaching Competence (total and dimension wise) of student-teachers on the basis of their levels (high, average and low) of General Intelligence.
2. There is no significant difference in Teaching Competence (total and dimension wise) of student-teachers on the basis of their levels (high, average and low) of Emotional Intelligence.

3. There is no significant difference in Teaching Competence (total and dimension wise) of student-teachers on the basis of their levels (high, average and low) of Spiritual Intelligence.

4. There is no significant difference in Teaching Competence (total and dimension wise), General Intelligence, Emotional Intelligence (total and dimension wise) and Spiritual Intelligence (total and dimension wise) on the basis of

   a. Stream (science, social sciences and Languages)
   b. Gender
   c. Residence

5. There is no significant influence of various interactions between General Intelligence (high, average and low) and

   a. Stream (science, social sciences and Languages)
   b. Gender
   c. Residence

6. There is no significant influence of various interactions between Emotional Intelligence (high, average and low) and

   a. Stream (science, social sciences and Languages)
   b. Gender
   c. Residence

7. There is no significant influence of various interactions between Spiritual Intelligence (high, average and low) and

   a. Stream (science, social sciences and Languages)
   b. Gender
   c. Residence

8. There is no significant influence of various interactions between General Intelligence (high, average and low) Emotional Intelligence (high, average and low) and Spiritual Intelligence (high, average and low) on Teaching Competence of student-teachers.

9. There is no significant correlation between

   a. Teaching Competence (total and dimension wise) and General Intelligence of student-teachers;
   b. Teaching Competence (total and dimension wise) and Emotional Intelligence of student-teachers and
c. Teaching Competence (total and dimension wise) and Spiritual Intelligence of student-teachers.

10. There is no significant correlation between Teaching Competence (total and dimension wise) and
   a. General Intelligence by controlling Emotional and Spiritual Intelligence of student-teachers;
   b. Emotional Intelligence by controlling General and Spiritual Intelligence of student-teachers and
   c. Spiritual Intelligence by controlling General and Emotional Intelligence of student-teachers.

1.10 Delimitations of the Problem

1. The present study was delimited to student-teachers (of regular B.Ed. course) studying in colleges of education affiliated to Guru Nanak Dev University, Amritsar.

2. The study was delimited to student-teachers of Science (teaching of mathematics and science), social science (teaching of Social Studies, Economics and Commerce) and languages (teaching of Punjabi and English) streams.