CHAPTER I
INTRODUCTION

1.1 Introduction

A teacher is the key figure in the building of a nation. The task of a teacher is transaction of knowledge, imparting the skill and inculcation of values. The role of a teacher is very important for the development of the child. Unless the country has persons of proper temperament and ability as teachers, it cannot have citizens of great vision and character. Since ages, the teacher’s role is regarded as an important one not only in molding the personality of the child but also in shaping the society. At the same time it is important to realize that an incompetent teacher is much more dangerous to the nation.

According to Patanker (1999) teachers shape the destiny of the nation in the classroom. They develop societies, indicate path of progress to the nation, and sustain the human aspects of existence. They nurture and cultivate humanistic, ethical and moral values among pupils. Due to technological progress and new visits of knowledge resulting from scientific innovations, the role of teacher is assuming new dimensions. According to Mathuri Shah (1994) “The teacher has an important, vital role to play in efforts to relate education to national development and social change. It is the responsibly of the teacher to guide and inspire students, to enrich his discipline, to inculcate values, which are in consonance with our cultural heritage and our social objectives.

The importance of the quality of teachers should be overemphasized because the strength and success of an educational system depends on them whether they teach in schools, colleges or universities. Actually the quality of a nation depends on the quality of its citizens, quality of citizens depends on the quality of their education and quality of education depends on the quality of their teachers. Quality depends on a large number of
factors. It is on the vision and leadership of the head of the institutions along with his committed team of teachers that the quality mainly depends. A teacher should have thorough understanding about the latest techniques and methods of transaction. He should constantly renew his knowledge, methodology and techniques. The personal and professional qualities of a teacher influence their professional efficiency. More competent and committed teachers are required in the classroom because the best curriculum and the most perfect syllabus remain ineffective in the absence of a good teacher. The teaching profession inherently warrants certain well-known self-obvious and implicit obligations, commitments and expectations from its members. Teacher education programmes prepare future teachers for lifelong learning and professionalism. To be professionals, teachers require a foundation of professional knowledge upon which the base instructional decisions depend. As professionals, teachers must base decisions on systematic knowledge to foster enquiry and the discovery of new knowledge. Providing teachers with professional skills consisting of education (knowledge of) and training (skill in) called as education of teachers.

A teacher education programmes prepare a teacher as more mature and confident to perform his task more efficiently. Proper education to the teacher enables him to have knowledge of how children grow, develop and learn, how they can be taught effectively and how their inner potentialities can be brought and developed. Dictionary of education C.V.Good (1973), defines teacher education as “All formal and in-formal activities and experience that help to qualify a person to assume the responsibility as a member of the educational profession or to discharge his responsibilities most effectively”.

It is true that the nation is built by its citizens, citizens are moulded by teachers and teachers are made by teacher educators. Teacher educators play an inevitable role not
as a mere transmitter of knowledge and culture but as a change agent also. They prepare the next generations, and it is the level of their commitment, devotion and dedication that determines the future society.

The National Council of Teacher Education (NCTE) came into being as a statutory organization in 1993 with a mandate to regulate teacher education in the country. Initial training of teachers (pre-service teacher training) is organized at the three levels, i.e. Pre-primary teacher education, elementary education and secondary teacher education. Pre primary teacher education is organized to prepare teachers for teaching pre-primary classes, i.e. Nursery and kindergarten. The minimum qualification for admission into the pre-primary teacher education programme is senior secondary examination, i.e., 12 years schooling. The duration of the course is one to two years. Pre-primary teacher training institutions are mostly unaided and private institutions. Elementary teacher education is organized to train teachers mainly for primary classes from 1 to 5; DIET’s have been set up in all the states to prepare elementary level teachers. An important feature of these is DIETS not only providing pre-service teacher education, they also provide in-service education to teachers. Apart from DIET’s some other teacher educational institutions e.g. CTES are offering pre-service teacher education at this level. Colleges of Education prepare teachers to teach at secondary level and senior secondary level of education. Some university departments also offer this course. At this level, we have Government financing institutions of Education and self-financing colleges of education affiliated to the respective universities.

Teacher educators are like a burning lamp having burning oil for lighting the mind and hearts of pupil-teachers. To provide quality teacher education at the elementary and secondary level, teacher-educators have to maintain a high level of academic and professional competence so as to prepare the best teachers for our
country’s schools. Unless, teacher educators are in a position to provide worthwhile experiences to our pupil teachers for realizing the stipulated teacher education objectives related to a particular type of teacher education course, the talk of any worthwhile quality teacher education would be futile by all means.

At this juncture of time, where unprecedented changes of knowledge and action manifest in all the diversions of worldly life, the role of teacher educators needs to take a positive direction. In other words, the need is to have quality teacher educators that mean, to have competent and committed teacher educators. Teacher educator’s professional competency is to develop innovative teaching skills among prospective teachers. Acquisition of innovative teaching skills/competencies depends on thinking patterns of prospective teachers. The prospective teachers coming from different disciplines will also exhibit different learning styles. Every action involves thinking process and the way we learn to organize the actions. Thus, every individuals thinking pattern and learning style certainly have a greater impact on the acquisition of any skill/competency. With regard to teaching competency the prospective teachers thinking style and learning style plays a significant role in the promotion of teaching competency.

Individual differences have always aroused great interest in educational psychology. In current cognitive psychology, research mainly focuses on cognitive differences such as thinking styles. In recent years, increasing attention has been given to thinking styles. Researches by Anthony Grasha (1996) have found that the thinking styles have implications for teaching and learning. Each teacher is unique in many ways. Teachers vary from one another in their learning style, thinking style and teaching competency. Teacher’s knowledge and thinking style is a key factor for effective teaching. Understanding teacher knowledge, teacher thinking and teacher beliefs can help us to understand teacher behavior in classroom. From earlier researches by Echendu
(2006) provides ample evidence that teacher thinking style influences teachers' perceptions, which, in turn, form teacher beliefs that affect their classroom performance. The development and influence of beliefs in teacher education has been a topic of increasing interest for researchers in recent years. The National Curriculum Framework - NCF 2005 presents a fresh vision and a new discourse on key contemporary issues and preparing ‘empowered teachers’, with a focus on addressing the growing demands of quality education being one of them. Curriculum Framework for Teacher Education’, 2006, too in it vision of a teacher views a teacher as “a facilitator who encourages learners to reflect, analyze and interpret in the process of knowledge construction” and views teaching as a process that “enables learners construct knowledge”. Dunn and Dunn (1993) defined Learning Style as a biological, developmental and personal trait that made the same instruction method effective for some students and not so effective for others. Different individuals perceive and process experiences in different preferred ways. Learning is complex phenomenon that is influenced by many factors. It is the interaction process between the individual and the surroundings. It is the reconstruction of past experiences that influences individual’s and whole group behaviour and dispositions.

1.1.1 Learning

Learning is a complex, interrelated system of accessing information, getting it into the brain, and processing that information to solve problem or support activities. As per psychology, learning is a process by which relatively permanent changes in behaviours are expected to occur as a result of practice (or) experience. Effective learning occurs when the learner exhibits readiness to learn, when he is motivated to learn and if he has some of the skills required for learning, possession of some of the resultant experiences is an added merit on the part of the learner which facilitates learning.
According to Mikulus (1977), “Learning is a vehicle by which almost all behaviours are acquired”. The term behavior is used comprehensively to mean cognitive, affective and psychomotor behavior. Vander (1979) defines learning as “the acquisition and storage of information as consequences of experiences”. Sherman (1982) says that “It is the process of acquiring new habits, skills, attitudes and knowledge. Behavior that is acquired primarily as a result of practice or training is said to be learned”.

Most learning takes place according to certain general principles. They include the important principles of readiness, practice, effect and motivation. The learning process is slowed down because of several factors. The learner himself debilitates his learning because of certain personal variables like attitude, anxiety, etc.

Learning is a key process in human behavior. It pervades everything one thinks and does. Learning is defined as a change in the individuals’ cognitive structure, one’s previously acquired storage of information. It is assumed that learners interact actively with the environment and construct meaning from their experience. Psychology since its inception has been engaged in investigating human learning. Psychologies point out that learning is an individual’s personal matter. Often wide range of individual differences exist at any given age level of pupils. The children vary not only in what they learn, their ability to learn and their level of achievement in learning but also in the ways how they learn.

1.1.2 Learning Style

Learning styles are personal way in which individual process information and the courts of learning new concepts and principles. Learning styles differ from individual to individual. For the same individual they differ from the subject to subject. As per the definitions offered by Rosenberg, “Learning style refers to an individual’s characteristics pattern of behavior when confronted with a problem”. In simple language, a learning
approach to learning a task is his learning style. It is his predisposition for behaviour in learning situations.

An individual’s characteristics pattern of behavior when confronted with a problem in his learning behavior. It is learner’s approach to learning a task (or) it is the learner’s predisposition to learn. The learning style of an individual is his pattern of learning a task. It is his predisposition in a learning situation.

Learning style has a bearing on the achievement of a learner. Knowledge of the influence of various styles of learning and achievement will assist the teachers to facilitate the learners while learning. The learning style is a hypothetical construct that has been developed to explain the process of mediation between stimuli and responses. Siegel and Coop (1974) viewed learning style, “as an integral concept that bridges the personality – cognitive dimension of the individual”. Hill (1996) defined, “learning style as the unique way in which an individual searches for meaning”. Lay Cock (1978) described, “Learning styles” as an individual characteristics way of responding to certain variables in the instructional environment. An operational definition of ‘learning style’ is given by the journal of education psychology, “an attribute of an individual which interacts with instructional circumstances in such a way as to produce differentiate learning achievement, as a function of their circumstances”. This clears that, in general, learning style is a way in which a learner approaches a problem or deals with learning situation. Debellow (1990) asserts that “Learning style is the way people absorb, process and retain information”. Dunn (1992) is also of the opinion that learning style is the way in which each learning to concentrate on, process and retain new and difficult information.

Though various psychologists have defined the term “learning style in their own manner, nevertheless, all agree that it refers to individual characteristic pattern of learning
behavior which is pervasive and consistent in nature (Verma, 1988). Keefe (1979) defines learning styles as the “composite of characteristic cognitive, affective, and physiological factors that serve as relatively stable indicators of how a learner perceives, interacts with and responds to the learning environment”. Stewart and Felicetti (1992) define learning styles as those “educational conditions under which a student is most likely to learn”. Learning style refers to the way one internally represents experiences and recalls or processes information.

1.1.3 Types of Learning Style

Learning is dynamic and interactive process in which the role and experience of the student are vital components. Learners in a given classroom may not vary only in the things they know and in their capabilities for learning, but also in the way in which they approach and deal with a given task. These pervasive and stylistics patterns of the students learning experience are known as “learning styles”. Learning styles have been classified based on several factors such as sense organ involved in reception (or) making judgment of material, or the aural / visual nature of the learning material or the rate of grasping, etc. several styles of learning has been noticed.

Riessman (1966) classified learning styles in the following manner such as Visual (Reading), Aural (Listening), Physical (Doing). Kagan (1965) classified two types of learning styles. There are Reflective deliberate (Careful, judicious, etc.) and Impulsive and intuitive (Jumped conclusion). Ruessman (1966) find out four kinds of learning style Visual (reading), Aural (listening), Verbal (talking), Physical (doing). Dececco (1971) classified the learning styles in two major types such as Conceptual tempos and Selection strategies. Conceptual tempos consists of Impulsive (fast tempo) and Reflective (slow tempo) and Selection strategies contain Conservative focusing, Focus gambling, Simultaneous scanning and Successive scanning. Nations (1973) classified the learning
style as follows - sensory orientations (different in auditory, visual etc.), Responsive (goal for single / group) and Thinking pattern.

Grasha – Riechmann (1979) identified six types of learning styles there are Independent, Dependent, Collaborative, Competitive, Participant and Avoidant. The characteristics of the above six types are as follows;

**Competitive**

Students who learn material in order to perform better than others in the class. Believe they must compete with other students in a course for the rewards that are offered. Like to be the center of attention and to receive recognition for their accomplishments in class.

**Collaborative**

Typical of students who feel they can learn by sharing ideas and talents. They cooperate with the teacher and like to work with others.

**Avoidant**

Not enthusiastic about learning content and attending class. Do not participate with students and teachers in the classroom. They are uninterested and overwhelmed by what goes on in class.

**Participant**

Good citizens in class. Enjoy going to class and take part in as much of the course activities as possible. Typically eager to do as much of the required and optional course requirements as they can.

**Dependent**

Show little intellectual curiosity and who learn only what is required. View teacher and peers as sources of structure and support and look to authority figures for specific guideline on what to do.
Independent

Students who like to think for themselves and are confident in their learning abilities. Prefer to learn the content that they feel is important and would prefer to work alone on course projects than with other students.

Rosenberg (1989) classified four types of learning style. They are: Rigid – inhibitors, In disciplined, Acceptance – anxious and Creative learner. The characteristics of each type of learning style are as follows.

Rigid – Inhibited Learners

Learners with a rigid inhibited style need constant supervision as they get confused easily. They tend to give responses unrelated to the questions. They are prone to be upset by the minor changes in the class routine and exhibit signs of nervousness. The behaviour of the rigid – inhibited learners is therefore a problem to themselves and teachers. Successful learning is possible after diagnosing the causes for their rigid – inhibited behavior.

In disciplined Learners

The in disciplined learners exhibits characteristic such as refusal to obey commands, showing disrespect to the teachers deceiving, stealing, bullying etc. Such learners invariably leave their learning tasks unfinished due to lack of tolerance. They concentrate on what gives them pleasure at the moment.

Acceptance – Anxious Learners

Individual with acceptance – anxious learning style have a strong desire for approval. They are more concerned about outside distraction. In their over botheration to preserve their self respect they develop self-defeating strategies when faced with a problem in the learning situation. They become jealous of those who receive better grades. They suffer from tension and frustration, when in the class of teacher who use
anxiety distance and fear as drives for control. Elimination at grades benefits the acceptance – anxious learners. A learning environment where he can feel free to make mistakes without fear or derision is equally important. Learning laboratories where the learner can work independent, can do his own thinking and direct his own learning are designed to help learners of acceptance – anxious style.

**Creative Style of Learners**

Learners of the creative style are self-confident, able to evaluate their own performance with objectivity, learn from their mistakes and tend to be divergent thinkers. Anxiety in them serves to invigorate and stimulate rather than impair their functioning creative learners perform well on a wide variety of tasks. They stay with the task until it is completed because of the pleasure it gives them. Teachers should allow creative learners to identify their own problems, to use their imagination and to work by themselves, as a way of capitalizing, on their zest for learning. Rosenberg (1989) research has shown that creative learners prefer independence in their pursuits.

**1.1.4. Kolb's Learning Style Model**

Kolb had listed out four types of learning style. They are:

**Type 1** (concrete, reflective). A characteristic question of this learning type is "Why?"

Type 1 learners respond well to explanations of how course material relates to their experience, their interests, and their future careers. To be effective with Type 1 students, the instructor should function as a motivator.

**Type 2** (abstract, reflective). A characteristic question of this learning type is "What?"

Type 2 learners respond to information presented in an organised, logical fashion and benefit if they have time for reflection. To be effective, the instructor should function as an expert.
**Type 3** (abstract, active). A characteristic question of this learning type is "How?" Type 3 learners respond to having opportunities to work actively on well-defined tasks and to learn by trial-and-error in an environment that allows them to fail safely. To be effective, the instructor should function as a coach, providing guided practice and feedback.

**Type 4** (concrete, active). A characteristic question of this learning type is "What if?" Type 4 learners like applying course material in new situations to solve real problems. To be effective, the instructor should stay out of the way, maximizing opportunities for the students to discover things for themselves.

This model classifies students as having a preference for either a concrete experience or abstract conceptualization (how they take information in) or an active experimentation or reflective observation (how they internalize information).

### 1.1.5. Felder-Silverman Learning Style Model

This learning style model classifies students as:

- **Sensing learners** (concrete, practical, oriented toward facts and procedures)
- **Intuitive learners** (conceptual, innovative, oriented toward theories and meanings);
- **Visual learners** (prefer visual representations of presented material pictures, diagrams, flow charts)
- **Verbal learners** (prefer written and spoken explanations);
- **Inductive learners** (prefer presentations that proceed from the specific to the general)
- **Deductive learners** (prefer presentations that go from the general to the specific);
- **Active learners** (learn by trying things out, working with others)
- **Reflective learners** (learn by thinking things through, working alone);
- **Sequential learners** (linear, orderly, learn in small incremental steps)
- **Global learners** (holistic, systems thinkers, learn in large leaps).
Watcher and Doers, (2004) identified and defined three main styles. They are the auditory learner, the visual learner and the kinesthetic learner. Many papers and books on improving learning abilities focus on these three types of styles. Individuals are generalized and classified according to these three types of styles. The three styles are briefly discussed below. Auditory learners are learners who listen and learn. They digest information by simply listening. They are able to sit through long lectures easily and walk away from the lecture with valuable and important knowledge attained. Visual learners are learners who learn by sight. They are able to visualize the solution to a problem. They see it in their head like a photograph and are then able to write it down. They are not able to follow verbal instruction well and works best when there is a list of things to do rather than being told what to do. Kinesthetic learners are learners who learn when their body is active. They need movement to digest information. They learn from touching and experiencing for themselves rather than being told a theory and made to understand it. They tend to misunderstand instructions when presented orally or visually. There is a concrete difference between each type of learning style, based on the learner’s interpretation of experience as well as common comments the learner would make in regards to knowledge acquisition.

The table 1.1 briefly illustrates the categorization of the three learning styles.

**Table 1.1 Categorization of three learning styles**

<table>
<thead>
<tr>
<th>Learning Style</th>
<th>Auditory</th>
<th>Visual</th>
<th>Kinesthetic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpretation of Experience</td>
<td>Identify sounds related to an experience</td>
<td>Have a sharp, clear picture of an experience</td>
<td>Develop a strong feeling towards an experience</td>
</tr>
<tr>
<td>Common comments made by the learner.</td>
<td>I hear you clearly, I want you to listen…</td>
<td>Do you make pictures in your head</td>
<td>Do you feel what you are saying? Are you in touch</td>
</tr>
</tbody>
</table>
Learning styles are as individual as our characteristics. Fuller (2004) stated that by providing fingerprints as a benchmark learning styles be compared. In other words, indicating that learning styles are unique to each and every person. There may not be general classifications for each and every style. Each person possesses a combination of two or three of these styles. In Learning Without Tears, (2008) the classification is more detailed and allows for more than just three main styles. The classification of styles here also allowed avenue for the characteristic input of the individual. This is a very important point that most learning style scientists leave out. Our character determines the way we learn. If we are sensitive individuals by nature, we tend to process information with our heart and not with head. If we are straightforward individuals who are relatively no nonsense we tend to process information at face value and determine its importance immediately upon processing it.

Felicetti (1992) classified the learning style in six different types which have been taken for the present study are Enactive reproducing, Enactive constructive, Figural reproducing, Figural constructive, Verbal reproducing and Verbal constructive.

**Enactive reproducing**

It indicates one’s preference for action based on concrete experiences. The emphasis is on imitation and practice. It is reproduction oriented.
**Enactive constructive**

It indicates one’s preference for conceptualizing one’s experiences based on the processing of enactive information.

**Figural reproducing**

It refers to one’s preference for visual experiences related to make diagrams, charts, pictures, maps and photographs. The emphasis is on imitation and practice. It is reproduction oriented.

**Figural constructive**

It refers to the preference for processing of figural experience which will lead to conceptualizations.

**Verbal reproducing**

It refers to the written or spoken information related to subject matter communicated through words.

**Verbal constructive**

It refers to the preference for reflective, accommodative and abstract thinking about subject matter so as to develop conceptualizations.

An important criterion for determining the learning style of an individual is the degree to which he is aware of and opens to information needed to solve a problem.

Characteristics of all six learning style types are mentioned in the Table 1.2.

**Table 1.2 Characteristics of six learning style types**

<table>
<thead>
<tr>
<th>Learning Style type</th>
<th>Characterization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enactive reproducing</td>
<td>It indicates one’s preference for action based concrete experiences. The emphasis is on imitation and practice. It is reproduction oriented.</td>
</tr>
<tr>
<td>Learning Style</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Enactive constructive</td>
<td>It indicates one’s preference for conceptualizing one’s experiences based on the processing of enactive information.</td>
</tr>
<tr>
<td>Figural reproducing</td>
<td>It refers to one’s preference for visual experiences related to making diagram, chart, picture, maps and photographs. The emphasis is on imitation and practice. It is reproduction oriented.</td>
</tr>
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<td>Figural constructive</td>
<td>It refers to the preference for processing of figural experience which will lead to conceptualizations.</td>
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<td>It refers to the preference for reflective, accommodative and abstract thinking about subject matter so as to develop conceptualizations.</td>
</tr>
</tbody>
</table>

1.2. EXPONENTS OF LEARNING STYLE

The principles of learning style in the perspective of chief exponents in the field were discussed below. David A. Kolb (1984) is the chief exponents of learning styles in his book “experiential learning propose - A theory of experiential learning in which he identified four principal stages

- Concrete experiences (CE)
- Abstract conceptualization (AC)
- Active experimentation (AE)
- Reflective observation (RO)
The CE / AC and AE / RO dimensions are polar opposites in terms of learning styles, and Kolb suggests four types of learners. They are diverse learners, assimilators, converge learners and Accommodators.

The learning style has been determined by observing that learning invariably follows a pattern that can be divided into four stages. Kolb argues that the learning style can begin at any one of the four points however, the following is the most often suggested pattern for the learning process.

**Stage I : Concrete Experience**

An individual carried out a particular action and then observes the effect of the action in this situation. Experiencing (or) immersing oneself in doing a task is the stage in which the learner simply carries out the task assigned. The engaged person is usually not reflecting on the task at this time but rather just carrying it out with intention.

**Stage II : Reflective Observation**

Reflection involves stepping back from task involvement and reviewing what has been done and experienced. The skill of attending, noticing differences and applying terms helps to identify subtle events. Understanding of the effects of an action in the particular instance is required in order to anticipate what would follow from the action if it was to be taken again under the same circumstances.

**Stage III : Abstract Conceptualization**

Conceptualization involves interpreting the events that have been noticed & understanding the relationships among them. It is at this stage that theory may be particularly helpful as a template for framing and explaining events. Understanding the general principle under which the particular instance falls does not imply ability to express the principle in a symbolic medium.
Stage IV: Active Experimentation

Application through action in a new circumstance within the range of generalization refers active experimentation. Within this context planning enables taking the new understanding and translates it into predictions about what is likely to happen next (or) what actions should be taken to refine the way the task is handled. Mariaemma Pelullo – Willis & Victoria Kindle Hodson are the author of Discover Your’s Child’s Learning Style and Midlife Crisis begins in Kindergarten. They have each spent more than twenty five years teaching, conducting workshops and seminars for parents and teachers, and developing educational programs and materials. They are the founders of the Learning – Success Institute where parents and teacher learn how to coach every child for their success in learning. They have developed “the learning style model of education” that helps adults and children discover their unique learning needs.

They present a positive approach that is based on working with each person’s natural gifts and dispositions, rather than applying dysfunctional labels such as ADD, Dyslexia, Hyperactive (or) Learning disabled. They help adults and children to use their learning styles as doorways into their unique ways of learning in order to reach academic goals and to discover their direction in life.

1.3. FACTORS THAT SHAPE AND INFLUENCE LEARNING STYLES

The behavior patterns associated with the four basic learning styles are shaped by transactions between people and their environment at five different levels. They are:

1. Personality
2. Educational specialization
3. Professional career
4. Current job role and
5. Adaptive competencies.
While Garner 2000; Furnam, Jackson & Miller 1999 have interpreted learning style as a personality variable, ELT (Experimental Learning Theory kolb’s 1984) defines learning style as a social psychological concept that is only partially determined by personality. Personality exerts a small but pervasive influence in nearly all situations; but at the other levels, learning style is influenced by increasingly specific environmental demands of educational specialization, career, job, and tasks skills. Table 1.3 summarizes the four learning styles with the five behaviours

Table 1.3 Learning Styles and Levels of Behavior

<table>
<thead>
<tr>
<th>Behavior Level</th>
<th>Diverging</th>
<th>Assimilating</th>
<th>Converging</th>
<th>Accommodating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personality types</td>
<td>Introverted Feeling</td>
<td>Introverted Intuition</td>
<td>Extraverted Thinking</td>
<td>Extraverted Sensation</td>
</tr>
<tr>
<td>Educational Specialization</td>
<td>Arts, English History Psychology</td>
<td>Mathematics Physical Science</td>
<td>Engineering Medicine</td>
<td>Education Communication Nursing</td>
</tr>
<tr>
<td>Professional Career</td>
<td>Social Service Arts</td>
<td>Sciences Research Information</td>
<td>Engineering Medicine Technology</td>
<td>Sales Social Service Education</td>
</tr>
<tr>
<td>Current Jobs</td>
<td>Personal Jobs</td>
<td>Information Jobs</td>
<td>Technical Jobs</td>
<td>Executive jobs</td>
</tr>
<tr>
<td>Adaptive Competencies</td>
<td>Valuing Skills</td>
<td>Thinking skills</td>
<td>Decision skills</td>
<td>Action skills</td>
</tr>
</tbody>
</table>
Personality Types

Although the learning styles of and learning modes proposed by ELT (Experimental Learning Theory) are derived from the works of Dewey, Lewin, and Piaget, many have noted the similarity of these concepts to Carl Jung’s descriptions of individuals’ preferred ways for adapting in the world. Several research studies relating the LSI with the Myers-Briggs Type Indicator (MBTI) indicate that Jung’s Extraversion/Introversion dialectical dimension correlates with the Active/Reflective dialectic of ELT, and the MBTI Feeling/Thinking dimension correlates with the LSI Concrete Experience/Abstract Conceptualization dimension. The MBTI Sensing type is associated with the LSI Accommodating learning style, and the MBTI Intuitive type with the LSI Assimilating style. MBTI Feeling types correspond to LSI Diverging learning styles, and Thinking types to Converging styles. The above discussion implies that the Accommodating learning style is the Extraverted Sensing type, and the Converging style the Extraverted Thinking type. The Assimilating learning style corresponds to the Introverted Intuitive personality type, and the Diverging style to the Introverted Feeling type. Myers (1962) descriptions of these MBTI types are very similar to the corresponding LSI learning styles as described by ELT (Experimental Learning Theory, Kolb 1984, 83-85).

Educational Specialization

Early educational experiences shape people’s individual learning styles by installing positive attitudes toward specific sets of learning skills and by teaching students how to learn. Although elementary education is generalized, an increasing process of specialization begins in high school and becomes sharper during the college years. This specialization in the realms of social knowledge influences individuals’ orientations toward learning, resulting in particular relations between learning styles and early training.
in an educational specialty or discipline. For example, people specializing in the arts, history, political science, English, and psychology tend to have Diverging learning styles, while those majoring in more abstract and applied areas such as medicine and engineering have Converging learning styles. Individuals with Accommodating styles often have educational backgrounds in education, communications, and nursing, and those with Assimilating styles in mathematics and physical sciences.

**Professional Career**

A third set of factors that shape learning styles stems from professional careers. One’s professional career choice not only exposes one to a specialized learning environment, but it also involves a commitment to a generic professional problem, such as social service, that requires a specialized adaptive orientation. In addition, one becomes a member of a reference group of peers who share a professional mentality and a common set of values and beliefs about how one should behave professionally. This professional orientation shapes learning style through habits acquired in professional training and through the more immediate normative pressures involved in being a competent professional. Research over the years has shown that social service and arts careers attract people with a Diverging learning style. Professions in the sciences and information or research have people with an Assimilating learning style. The Converging learning styles tends to be dominant among professionals in technology-intensive fields such as medicine and engineering. Finally, the Accommodating learning style characterizes people with careers in fields such as sales, social service, and education.

**Current Job Role**

The fourth level of factors influencing learning style is the person’s current job role. The task demands and pressures of a job shape a person’s adaptive orientation. Executive jobs, such as general management, that requires a strong orientation to task
accomplishment and decision making in uncertain emergent circumstances require an Accommodating learning style. Personal jobs, such as counselling and personnel administration, which require the establishment of personal relationships and effective communication with other people, demand a Diverging learning style. Information jobs, such as planning and research, which require data gathering and analysis, as well as conceptual modeling, require an Assimilating learning style. Technical jobs, such as bench engineering and production, require technical and problem-solving skills, which require a convergent learning orientation.

 Adaptive Competencies

The fifth and most immediate level of forces that shapes learning style is the specific task or problem the person is currently working on. Each task we face requires a corresponding set of skills for effective performance. The effective matching of task demands and personal skills results in an adaptive competence. The Accommodative learning style encompasses a set of competencies that can best be termed acting skills: Leadership, Initiative, and Action. The Diverging learning style is associated with valuing skills: Relationship, Helping Others, and Sense Making. The Assimilating learning style is related to thinking skills: Information Gathering, Information Analysis, and Theory Building. Finally, the Converging learning style is associated with decision skills like Quantitative Analysis, Use of Technology, and Goal Setting (Kolb1984).

1.4 FACTORS AFFECTING LEARNING STYLE

There are several factors that affect an individual ability to perceive. Some are internal to each person and some are external. They are Physical growth, Basic Need, Goals & values, Self – concept, Time and opportunity and Element of threat.
Physical Organism

The physical organism provides individuals with the perceptual apparatus for sensing the world around them. Pilots, for example, must be able to see, hear, feel and respond adequately while they are in the air. A person whose perceptual apparatus distorts reality is denied the right to fly at the time of the first medical examination.

Basic Need

A person’s basic need is to maintain and enhance the organized self. The self is a person’s past, present and future combined; it is both physical and psychological. A person’s most fundamental, pressing need is to preserve and perpetuate the self. All perceptions are affected by this need.

Just as the food, one sees and the sounds one hears become part of the psychological self. A person has physical barriers which keep out those things that would be damaging to the physical being such as blinking at an arc weld (or) flinching from a hot iron. Like-wise a person has perceptual barriers that block those sights, sounds, and feeling which pose a psychological threat. Helping people to learn requires finding ways to aid them in developing better perceptions in spite of their defense mechanisms. Since a person’s basic need is to maintain and enhance the self, the instructor must recognize that anything that is asked of the student which may be interpreted by the student as imperiling the self will be resisted (or) denied. To teach effectively, it is necessary to work with this life force.

Goals and Values

Perceptions depend on one’s goals and values. Every experience and sensation which is funneled into one’s central nervous system is colored by the individual’s own beliefs and value structures. Spectators at a ball game may see an infraction (or) foul differently depending on which team they support. The precise kinds of commitments and
philosophical outlook which the student holds are important for the instructor to know, since this knowledge will assist in predicting how the student will interpret experiences and instructions. Goals are also a product of one’s value structure. Those things which are more highly valued and cherished are pursued; those which are accorded less value and importance are not sought after.

**Self-Concept**

Self concept is a powerful determinant in learning. A student's self-image described in such terms as confident and insecure, has a great influence on the total perceptual process. If a student's experience tends to support a favourable self-image, the student tends to remain receptive to subsequent experiences. If a student has negative experiences which tend to contradict self-concept, there is a tendency to reject additional training.

**Time and Opportunity**

It takes time and opportunity to perceive. Learning sometimes depends on other perceptions which have preceded these learning, and on the availability of time to sense and relate these new things to the earlier perceptions. Thus, sequence and time are necessary.

**Elements of Threat**

The element of threat does not promote effective learning. In fact, fear adversely affects perception by narrowing the perceptual field. Confronted with threat, students tend to limit their attention to the threatening object or condition. The field of vision is reduced, for example, when an individual is frightened and all the perceptual faculties are focused on the thing that has generated fear.

**Insight**

Insight involves the grouping of perceptions into meaningful wholes. Creating insight is one of the instructor's major responsibilities. To ensure that this does occur, it is
essential to keep each student constantly receptive to new experience and to help the student realize the way each piece relates to all other pieces of the total pattern of the task to be learned.

**Motivation**

Motivation is probably the dominant force which governs the student’s progress and ability to learn. Motivation may be negative (or) positive, tangible or intangible, subtle and difficult to identify or it may be obvious.

**1.5. THEORETICAL OVERVIEW OF THINKING STYLES**

Interest in the notion of styles developed when the conventional ability tests provide only partial answer for the question why people differ in their performance. Personality differences influences the performance of people in all fields they engage. But personality is not the entire answer. So an interface between ability and personality was needed. The concepts of emotional intelligence, social intelligence etc. is resulted from this need. The notion of styles is also an outcome of the need to explain the individual differences in performance.

According to Webster’s new world dictionary, a style is “a distinctive or characteristic manner… or method of acting or performing”. Royce (1973) viewed styles as consistent modes of cognitive and effective processing which influence the way cognitive abilities and affective traits are related to individual behaviour. Styles are seen as higher order traits: they influence the way single traits are related to behaviour. Sternberg (2002) defines the ‘Thinking Styles’ way of thinking as the individual's preferred thinking style when doing business, and describes how the individual uses or exploits the capacities that he owns (such as knowledge )which is not an ability but it is located between the character and capacities (character - ways of thinking – capacity).
A style is a preferred way of thinking or performing. It is not ability, but rather a preferred way of using the ability one has. Ability refers to how well one can do something. A style refers to how some one likes to do something. Constructs of social, practical and emotional intelligence or multiple intelligence expand our notion of what people can do. The construct of style expand our notion of what people prefer to do; how they capitalize the abilities they have. Sternberg et. al. (1997) argues that thinking styles are important as or more important than abilities no matter how broadly abilities are defined. How people prefer to think might be just as important as or more important than how well they think. People do not have a style, but rather a profile of styles. They show varying amount of each style but are not locked into any one profile. People may be particularly identical in their abilities and yet have very different styles. Styles can be varied to different tasks and situations. Styles are not fixed but fluid. Various styles are not good or bad but only different.

Psychologists attempted to integrate to and extend the fragmented research results displayed in various theories of styles. They tried to combine several mini-theories of intellectual functioning, learning and personality and explained the ways in which people perceive and understand the world around them and how they then translate that perception of the external world into an internal representation within their minds. Sternberg (1997) introduced a theory of mental self-government to combine the various cognitive, learning and personality styles.


Mental self-government theory of thinking styles was first introduced by Sternberg et al in 1988. He and his associates developed this in to a comprehensive theory of thinking styles by further studies and investigations. The theory uses the government
metaphor to explain how intelligence and personality characteristics are organized and directed. Like governments, individuals are characterized on the basis of observation of their preferred functions, forms of organization, levels they function at, scope and leanings.

The basic idea behind the theory of mental self-government is that the forms of government people have in the world are not coincidental. Rather they are external reflections of what goes on in people’s minds. They represent alternative ways of organizing and thinking. Thus the forms of government people see are mirrors of their minds. There are a number of parallels between the organization of the individual and organization of the society. Just as society needs to govern itself, people need to govern themselves. People need to decide on priorities as does a government. People need to be responsive to changes in the world, as does a government. And just as there are obstacles to change in government, so are there obstacles to change within the people.

Thirteen different dimensions of thinking styles were identified under five categories in this theory. In analogy to governments, people carry out legislative, executive and judicial functions. Some individuals prefer to follow rules and existing methods (executive style). Others enjoy creating and formulating their own rules (legislative style). While still others like to judge and evaluate rules, ways, ideas and procedures (judicial style). Government govern themselves according to one of the following four types of government: oligarchic, monarchic, hierarchic and anarchic. Applied to mental self-government, these four styles concern the way a person organizes information processing. Individuals with a monarchic style prefer to focus on one goal at the time and address the next goal when the first goal is completed. Individuals with an oligarchic or hierarchic style like to deal with multiple goals. The former individuals have difficulty in assigning priorities to the various goals, thus creating conflict and tension.
The latter have a good sense of priority. They prefer to work systematically. Individuals with an anarchic thinking style tend to be motivated by a wide range of needs and goals and are flexible in their approach. However, they have difficulty setting priorities since they have no firm set of rules.

Mental self governments also operate at different levels, such as the global or the local level, and are therefore more concerned with either general or specific policy making. In analogy, individuals with a global thinking style prefer general, abstract reasoning, pondering in the world of ideas, whereas individuals with a local thinking style are more down to earth and oriented towards the pragmatics of the situation. Mental self governments also differ in scope dealing primarily with internal and external issues. Likewise, individuals with an internal thinking style differ from individuals with an external thinking style, preferring to work independently from others. They are more introverted and less socially sensitive than persons with an external style. Finally, governments have a preference for liberal or conservative style and so have individuals. Those with a liberal thinking style give preference to tasks and projects and allow them to cover unexplored ground. They seek rather than avoid ambiguous and uncertain stimuli. In contrast, individuals with a conservative thinking style prefer familiar, non-threatening situations. Together, these thirteen thinking styles can characterize individuals to a greater or lesser extent. Categories and dimensions of Thinking Styles in the mental self-government theory of Thinking Styles is presented in the below flowchart.
Functions of Mental Self-Government

Roughly speaking, mental self government serves three functions- Executive: Legislative and Judicial. The executive branch carried out the initiatives, policies, and laws enacted by the legislative branch, and the judicial branch evaluates whether the laws are being carried out correctly and if there are violations of these laws. People also need to perform these functions in their own thinking and working.

Legislative people like to come up with their own ways of doing things and prefer to decide for themselves what they will do and how they will do it. Legislative people like to create their own rules, and prefer problems that are not pre structured or pre fabricated. Some of the preferred kinds of activities of a legislative stylist are writing creative papers, designing innovative projects, creating new business or educational systems, and inventing new things. Some of the kinds of occupations they prefer, all of which let them
exercise their legislative bent, are creative writer, scientist, artist, sculptor, investment banker, policy maker, and architect.

The legislative style is particularly conducive to creativity, because creative people need not only the ability to come up with new ideas, but also the desire to. Unfortunately, school environments do not often reward the legislative style. Indeed, even the training for occupations that require people to be creative often discourages the legislative style. Thus, a person might find him — or herself in a science course, required to memorize facts, formulas, and charts. Yet scientists almost never have to memorize anything: if they don’t remember something, they look it up on their bookshelf. Creative writers also need a legislative style, but a legislative style is not often encouraged, and is often discouraged in literature classes, where the emphasis in the lower grades is likely to be on comprehension and in the upper grades on criticism and analysis.

Executive people like to follow rules and prefer problems that are pre structured or prefabricated. They like to fill in the gaps within existing structures rather than to create the structures themselves. Some of the kinds of activities they are likely to prefer are solving given mathematical problems, applying rules to problems, giving talks or lessons based on other people’s ideas and enforcing rules. Some occupations that can be a good fit to executive thinkers are certain types of lawyer, police officer on patrol, builder of other people’s designs, solider, proselytizer for other people’s systems, and administrative assistant.

The executive style tends to be valued both in school and in business, because executive stylists do what they are told, and often do it cheerfully. They follow directions and order, and evaluate themselves in the same way the system is likely to evaluate them, namely, in terms of how well they do what they are told. Thus, a gifted child with an
executive style is likely to do well in school, whereas a gifted child with a legislative style is more likely to be viewed as nonconforming and even rebellious. Peer-group pressure encourages children to adopt an executive style as well, but with respect to the norms of the peer group rather than of the school. Thus, pressure from many sources can lead students to adopt this style.

*Judicial* people like to evaluate rules and procedures, and prefer problems in which one analyses and evaluates existing things and ideas. The judicial stylist likes activities such as writing critiques, giving opinions, judging people and their work, and evaluating programs. Some of their preferred kinds of occupations are judge, critic, program evaluator, consultant, admission officer, grant and contract monitor and systems analyst. Schools often shortchange the judicial style. Although the work of a historian, for example, is in large part judicial—the analysis of historical events—many children get the idea that the work is largely executive—remembering data of events. As in science, therefore, some of the ablest students may decide to pursue some other field, even though the style of thinking may be well suited not to their preparation for the career, but to the actual career itself.

Problems of mismatching are not limited to the school. In many businesses, including schools, lower-level managers are sought who have a largely executive style. They do what they are told, and try to do it well. People with such a style are often then promoted into the higher levels of management. The problem is that in the higher levels, a more legislative or judicial style also becomes desirable. But many of the people with a more legislative or judicial style may well have been derailed early in their management careers, so that they never get to the higher levels of management. People may be promoted to higher positions for which their styles are not suited.
The Forms of Mental Self-Government

The theory of mental self-government specifies four forms: monarchic, hierarchic, oligarchic, and anarchic. Each form results in a different way of approaching the world and its problems.

A *monarchic* person is someone who is single-minded and driven. The individual tends not to let anything get in the way of his or her solving a problem. Monarchic people can be counted on to get a thing done, given that they have set their mind to it.

Monarchic bosses often expect tasks to be done, without excuses or extenuating circumstances. When you get married to a monarchic individual, you usually find it out quickly. You may see little of the person, and when you do see the person, his or her mind may be elsewhere. If you, rather than say, work, are the subject of a monarchic spouse’s obsession, you may find yourself receiving more attention than you expected.

Monarchic children often encounter a problem in school: They usually want to be doing something other than what they are doing and are like to be thinking about the other thing while they are supposed to be attending to the teacher. Sometimes, their interests are best served when a teacher (or parent) brings whatever they are monarchic about to bear on other things they are doing. For example, child who has a strong interest in sports but is not a reader may become a reader if given sports novels to read. A child who loves cooking but not math could be given math problems to do that involve recipes. In this manner the child may become interested in things that previously are of no interest.

The *hierarchic* person has a hierarchy of goals and recognizes the need to set priorities, as all goals cannot always be fulfilled or at least fulfilled equally well. This person tends to be more accepting of complexities than is the monarchic person, and recognizes the need to view problems from a number of angles so as to set priorities correctly.
Hierarchic individuals tend to fit well into organizations because they organize the need for priorities. However, if their priorities are different from those of the organization, problems may arise. Then they may tend themselves organizing their work according to their own, but not their organization’s priorities. The company lawyer who wants to spend too much time on pro bono work, the university professor who wants to spend too much time teaching and the cook who wants each meal to be perfect but who takes forever in cooking the meals may soon find themselves unwelcome in their respective organizations.

The oligarchic person is like the hierarchic person in having desire to do more than one thing within the same time frame. But unlike hierarchic people, oligarchic people tend to be motivated by several, often competing goals of equal perceived importance. Often, these individuals feel pressured in the face of competing demands on their time and other resources. They are not always sure what to do first, or how much time to allot to each of the tasks they need to complete. However, given even minimal guidance as to the priorities of the organization in which they are involved, they can become as effective as or even more effective than people with other styles.

The anarchic person seems to be motivated by a potpourri of needs and goals that can be difficult for him or her, as well as for others to sort out. Anarchic people take what seems like a random approach to problems. They tend to reject systems and especially rigid ones and to fight back at whatever system they see as confining them.

Although anarchic individuals may have trouble adapting to the worlds of school and work, especially if the environment is a rigid one, they often have greater potential for creative contribution than do many of the people who find the anarchic so distasteful. Because anarchic tend to pick up a little form here, a little from there, they often put together diverse bits of information and ideas in a creative way. They are wide-ranging in
the scope of things they will consider, and so may see solutions to problems that others
overlook. The problem for the teacher, parent or employer is to help the anarchic person
harness this potential for creativity, and achieve the self-discipline and organization that
are necessary for any kind of a creative contribution. If this harnessing effort works, then
the anarchic person may end up succeeding in domains where others may fail.

**Levels of Mental Self-Government**

**Global** individuals prefer to deal with relatively large and abstract issues. They
ignore or don’t like details, and prefer to see the forest rather than the trees. Often, they
lose sight of the trees that constitute the forest. As a result, they have to be careful to get
lost on “Cloud Nine”.

**Local** individuals like concrete problems requiring working with details. They
tend to be oriented toward the pragmatics of situation and are down-to-earth. The danger
is that they may lose the forest for the trees. However, some of the worst system failures
such as in aviation and rocketry have occurred when people have ignored what seemed at
the time to be small details. Thus, almost any team requires at least some local
individuals.

Global and local people can work particularly well together, because each
attends to an aspect of task completion that the other would rather forget. Two global
people trying to complete a project may each want to deal with the big issues, leaving no
one to attend to the details; two local people may find themselves without anyone to do
the higher order initial planning needed to get the job done. It helps if neither individual is
so extreme that he or she cannot understand and appreciate what the other to offer.
Extreme localists or globalists can get carried away and start to lose sight either that the
big issues exist, or that there are details that someone needs to attend to.
Scope of Mental Self-Government

**Internal** individuals are concerned with internal affairs— that is to say, these individuals turn inward. They tend to be introverted, task-oriented, aloof, and sometimes socially less aware. They like to work alone. Essentially, their preference is to apply their intelligence to things or ideas in isolation from other people.

An example of how teachers (or anyone else) can confuse style with abilities is shown by the case of a kindergartner who was recommended by her teacher for retention. When asked why she had made this recommendation, the teacher pointed out that although the child’s academic work was quite good, the child did not seem “socially ready” for first grade. That is to say, the child preferred to be on her own rather than to interact with other children, which the teacher took as a lack of some kind of social intelligence. In fact, the child was simply an internal. She was promoted, and has done splendidly well both academically and in her social relations.

**External** individuals tend to be extroverted, outgoing and people oriented. Often they are socially sensitive and aware of what is going on with others. They like working with other people wherever possible. Many of the questions that arise in education as to “what is better?” stem from a fundamental misunderstanding of the interaction of styles with learning experience. For example, in recent years, there has been a strong push toward what is called “cooperative learning” which means children working together to learn in groups. The idea is supposed to be that children will learn better in small working groups than they will when they are left to their own devices.

From the standpoint of the theory of mental self-government, there is no single right answer to questions such as whether children learn better individually or in groups, and indeed, this question, like so many others, is viewed as misformulated. External children will prefer working in groups and will probably learn better when learning with
others. Internal children will prefer to work alone, and may become anxious in a group setting.

This is not to say that internal should never work in groups or externals, alone. Obviously, each kind of individuals needs to develop the flexibility to learn to work in a variety of situations. But the stylistic point of view implies that teachers, like students, need to be flexible in the way they approach the teaching-learning process. They need to provide children with both individual and group settings so that children can be comfortable some of the time and challenged the rest of the time. Always providing the same working setting tends to benefit some students and to penalize others.

Leanings of Mental Self-Government

The *Progressive* individual likes to go beyond existing rules and procedures, to maximize change and to seek situations that are somewhat ambiguous. The individual is not necessarily “politically” liberal. A political conservative could have a liberal style in trying to implement, say, a Republican agenda in a new and all-encompassing way. Thrill seekers tend to have a liberal style, as do people who, in general, quickly become bored.

The *conservative* individual likes to adhere to existing rules and procedures, minimize change, avoid ambiguous situations where possible, and stick with familiar situations in work and professional life. This individual will be happiest in structured and relatively predictable environment. When such structure does not exist, the individual may seek to create it. Characterizations and examples of various dimensions of thinking styles in the mental self-government theory of thinking styles are given in Table 1.4.
Table 1.4: Characterization of Various dimensions of Thinking Styles in the Mental Self – Government Theory of Thinking Styles - Robert Sternberg (1997)

<table>
<thead>
<tr>
<th>Thinking Style Dimension</th>
<th>Characterization</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislative</td>
<td>Likes to create, invent, design, do things his or her own way, have little assigned structure</td>
<td>Likes doing science projects, writing poetry, stories, or music, and creating original artworks.</td>
</tr>
<tr>
<td>Executive</td>
<td>Likes to follow directions, do what he or she is told, be given structure.</td>
<td>Likes to solve problems, write papers on assigned topics, do artwork from models, build from designs, learn assigned information.</td>
</tr>
<tr>
<td>Judicial</td>
<td>Likes to judge and evaluate people and things</td>
<td>Likes to critique work of others, write critical essays, give feedback and advice</td>
</tr>
<tr>
<td>Monarchic</td>
<td>Likes to do one thing at a time, devoting to it almost all energy and resources.</td>
<td>Likes to immerse self in a single project, whether art, science, history and business.</td>
</tr>
<tr>
<td>Hierarchic</td>
<td>Likes to do many things at once, setting priorities for which to do when and how much time and energy to devote to each.</td>
<td>Likes to budget time for doing homework so that more time and energy is devoted to important assignments.</td>
</tr>
<tr>
<td>Type</td>
<td>Likes to do...</td>
<td>Likes to devote...</td>
</tr>
<tr>
<td>----------</td>
<td>----------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Oligarchic</td>
<td>do many things at once, but has trouble setting priorities.</td>
<td>to reaching comprehension items, so may not finish standardized verbal-ability tests.</td>
</tr>
<tr>
<td>Anarchic</td>
<td>take a random approach to problems; dislike systems, guidelines, and practically all constraints.</td>
<td>writer an essay in stream of consciousness form; in conversations, jumps from one point to another; starts things but doesn’t finish them.</td>
</tr>
<tr>
<td>Global</td>
<td>deal with big picture, generalities, and abstractions.</td>
<td>writer an essay on the global message and meaning of a work of art.</td>
</tr>
<tr>
<td>Local</td>
<td>deal with details, specifics, concrete examples.</td>
<td>writer an essay describing the details of a work of art and how they interact.</td>
</tr>
<tr>
<td>Internal</td>
<td>work alone, focus inward, be self-sufficient.</td>
<td>prefers to do science or social studies project on his/her own.</td>
</tr>
<tr>
<td>External</td>
<td>work with others, focus outward, be inter-dependent.</td>
<td>prefers to do science or social studies project with other members of a group.</td>
</tr>
<tr>
<td>Progressive</td>
<td>do things in new ways, defy conventions.</td>
<td>prefers to figure out how to operate new equipment even if it is not the recommended way; prefers open classroom setting.</td>
</tr>
</tbody>
</table>
Conservative | Likes to do things in tried and true ways, follow conventions. | Prefers to operate new equipment in traditional way; prefers traditional classroom setting.

The theory of mental self-government proposed by Sternberg is an attempt to integrate and extend the fragmented research results displayed in various theories of styles. Stenberg’s theory combines several mini-theories of intellectual functioning, learning and personality. It has high potential for generating hypotheses about the way student’s abilities and personality interacts in very day behaviour. For example, Sternberg hypothesized that; the use of specific tests will favour students with certain thinking styles at the expense of students with other styles. He predicted that multiple choice tests would strongly favour students with executive and local styles but also those students with internal and conservative styles. On the other hand, project assessment would favour students who enjoy performing resource intensive assignments. Sternberg also claimed that students with differing thinking styles handle their limited resources in different ways.

Table 1.5 shows various methods of assessment and the thinking styles with which they are most compatible. Note that different methods of assessment tend to benefit different styles of thought. For example, multiple-choice testing is very much oriented toward executive and local thinkers, and projects tend to be oriented more toward legislative and judicial thinkers as well as global ones. Note also the importance not only of the method of assessment used, but also the way the assessment is scored. An essay can be scored for recall (memory), which benefits executive students; or for
analysis, which benefits judicial students; or for creativity, which benefits legislative students.

Table 1.5 Thinking Styles and Forms of Assessment

<table>
<thead>
<tr>
<th>Form of Assessment</th>
<th>Main Skills Most</th>
<th>Compatible Style(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short answer/multiple choice</td>
<td>Memory</td>
<td>Executive/local</td>
</tr>
<tr>
<td></td>
<td>Analysis</td>
<td>Judicial/local</td>
</tr>
<tr>
<td></td>
<td>Time allocation</td>
<td>Hierarchical</td>
</tr>
<tr>
<td></td>
<td>Working by self</td>
<td>Internal</td>
</tr>
<tr>
<td>Essay</td>
<td>Memory</td>
<td>Executive/local</td>
</tr>
<tr>
<td></td>
<td>Macroanalysis</td>
<td>Judicial/global</td>
</tr>
<tr>
<td></td>
<td>Microanalysis</td>
<td>Judicial/global</td>
</tr>
<tr>
<td></td>
<td>Creativity</td>
<td>Legislative</td>
</tr>
<tr>
<td></td>
<td>Organization</td>
<td>Hierarchical</td>
</tr>
<tr>
<td></td>
<td>Time allocation</td>
<td>Hierarchical</td>
</tr>
<tr>
<td></td>
<td>Acceptance of teacher viewpoint</td>
<td>Conservative</td>
</tr>
<tr>
<td></td>
<td>Working by self</td>
<td>Internal</td>
</tr>
<tr>
<td>Project/portfolio</td>
<td>Analysis</td>
<td>Judicial</td>
</tr>
<tr>
<td></td>
<td>Creativity</td>
<td>Legislative</td>
</tr>
<tr>
<td></td>
<td>Teamwork</td>
<td>External</td>
</tr>
<tr>
<td></td>
<td>Working by self</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td>Organization</td>
<td>Hierarchical</td>
</tr>
<tr>
<td></td>
<td>High commitment</td>
<td>Monarchic</td>
</tr>
</tbody>
</table>
1.6. LEARNING STYLES AND THINKING STYLES AND ITS RELATION TO TEACHING COMPETENCY

Thinking, learning and cognitive styles are important in the cognitive information processing. Yeap’s Model had linked these three variables. Learning styles – environmental, emotional, sociological, physical, psychological learning strategies and instructional strategies plays a significant contribution in the cognitive information processing. Similarly, thinking components knowledge & dispositions and meta cognition components has its own impact on the cognitive information processing. Likewise, cognitive style components – perception & processing and hemisphericity, thinking strategies – decision making, problem solving, conceptualizing and thinking skills – critical thinking, processing, recalling, reasoning and creative thinking contribute cognitive information processing. Thus there is a sharp link between thinking styles, learning styles and cognitive styles as stated in Yeap’s Model which is given below in a diagrammatic form.

“The only true teacher is he who can immediately come down to the level of students and transfer his soul to the student’s soul and see through the student’s eyes and hear through his ears and understand through his mind.” While learning and teaching can, and do, take place in many different settings, most societies realize that education is too important to be left to a mere chance, Consequently, they establish schools to facilitate learning and to help people live a better and happier life. Schools are created to provide a certain type of educational experience, which can be called the curriculum. Teacher are trained and hired by society to help facilitate the intellectual, personal and social development of those members of society who attend schools. Needless to say that the image of the teacher has changed considerably over the years. Today, teachers are better educated, earn more money and are
respectable members of the society. Increase in the educational level of teachers is in recognition of the fact that teacher’s are to facilitate the intellectual, personal and social development of their students, they must be better educated than ever before (Myron Beton 1970).

1.6.1. Yeap's model linking thinking, learning and cognitive styles

Fig 1.2. Yeap’s model linking thinking, learning and cognitive styles
Dictionary of Education (Good, 1973) defines a teacher as “A person who has completed a professional curriculum in a teacher education institution and whose training has been organized by the award of appropriate teaching certificate and a person who instructs others”. The teacher’s task is related to our perception of education. The process of education keeps on changing according to the contemporary demands and needs of the society. Therefore, the present teacher has to play different roles, and has to be a competent professional. A skilled teacher; always expected to be an effective communicator, a designer and user of learning resources, a learning facilitator and an active participant in community life. A teacher in our society today is called upon to do a variety of things viz.

- Organize learning resources;
- Conduct interactive classroom teaching;
- Cater to special needs of disabled children;
- Organize and guide a variety of co-curricular activities;
- Train students in problem-solving, develop in them qualities of democratic citizenship and promote environmental consciousness; and
- Organize and participate in programmes of community service and development.

Contrary to the ancient times, the role of the teacher at present is not only to train and discipline the child’s mind but also to create a classroom environment conducive for a smooth and successful teaching-learning process. Whereas in the past children used to attend the school with the major objective of acquiring knowledge in different subjects, the modern era demands, as much as possible, practical uses of the gained knowledge. Therefore, the quality of education today is largely based on the application of ability to transfer the acquired knowledge to cope with problems. Masses are attending regular schools and hence, large-sized classrooms are increasing day
by day, together with advanced educational and instructional technology as well as improved teaching strategies.

According to Barr (1952), it is customary to think of the teacher as

- A director of learning;
- A friend or counsellor of pupils;
- A member of a group of professional workers; and
- A citizen participating in various community activities - Local, State, National and International.

Education Commission (1964-66) thus aptly remarked, “Of all the different factors which influence the quality of education and its contribution to national development, the quality, competence and character of the teachers are undoubtedly the most significant. Nothing is more important than securing a sufficient supply of high quality recruits to the teaching profession, providing them with the best possible professional preparation and creating satisfactory conditions at work in which they can be fully effective.” In the entire teaching learning process, the teacher is a “powerful agent who can inculcate the democratic ideas of nationhood in children, the ‘further citizens of the nation. High achievements of the students, better school performance, moulding of children into better citizens and exposing them in the arena of growing competition are some of the major issues lying at the hands of the teacher. A skilful management of the teaching learning process can only bring about success in justifying these issues, for which the teachers have to become master as well as skill technicians, particularly in the wake of the fast growing intervention of the information and communication technologies as inputs in the education process. Despite their pressures and perils vis-à-vis the traditional practice of schooling. That apart, though present day teachers are themselves conscious of what is expected of
them as teachers in the new social order, they are also concerned with
innumerable pressures, tensions and worries about their own status in today’s
society and proper working conditions in their school environments that often
divert and distract them from their real aim as teaching. As a result, by and large,
they tend to work mechanically just to receive their salaries as a mere labor force, their
dissatisfaction with the working condition in schools in particular has significant
impairing on the quality of their teaching and in turn on the student’s performance. This
cannot as such so deemed as the hallmark of an effective teacher.

1.7 An Effective Teacher

According to Southern (1974), an effective teacher is the one who has a sense
of humour, ability to explain things clearly so that students can easily understand what is
being taught, ability to make any subject interesting to learn, ability to control the class,
ability to be ready and willing to help students when they need and ability to be as fair as
possible in dealing with students.

The acronym used by Pritam Singh (1998) for the teacher spells out certain
attributes of an effective teacher such as : T for Temperance; E for Empathy; A
for Academic Aristocracy; C for Commitment; H for Humour, E for Ethics; R for
Reflection. Although this acronym does suggest some characteristic of a good teacher, it
is not comprehensive enough to enliven the teacher to his ground level task of
teaching in the classroom.

In the words of Anderson (1991), “An effective teacher is the one who quite
consistently achieves goals, which either directly or indirectly, focuses on the learning of
their students”.

Fullan (1990) wanted to understand what it is about such teachers that make them
effective. The knowledge and skills being taught to teachers are linked with what
they already know and can do, teachers are encouraged to apply what they have learnt from their in-service experiences in their own classroom; actually, teachers should be encouraged to “try, evaluate, modify, try again.”

The National Policy on Education (1986) has also rightly stressed the significant role that teachers need to play in the improvement of the educational system and in the development and growth of education. The teacher’s role is viewed in terms of a mediator, a facilitator and a director of learning, a helper and controller of the learning behaviour of the learner; a dispenser of knowledge; a counsellor, an evaluator of the learner’s performance in the academic field; an expert in class management activities; and a link between school, parents, community and society. In fact, this policy perspective gives a very comprehensive operational definition of the role performance of teachers vis-à-vis what really makes them effective teachers in the context of the new emerging social order and the building of a learning society in this age of global communication and software technology in education and teaching.

1.7.1. The Profession of Teaching

Teaching is the most arduous and complex profession in our society, and also an important job. Yet teachers are often overworked, underpaid and underappreciated. There is a common bond which unites all teachers, i.e. the desire to help students to reach their maximum potentials as human beings. When we achieve this goal, when we see students grow as a result of our teaching, we know that all the training and hard work have been worth the effort. Thus, teaching is a behaviour, an organized set of cognitive acts or operations of teaching, both overt and covert, organised logically and meaningfully. It has a configuration, which can be analyzed, reasoned out, described, explained and changed for improvement. These behaviours can be systematically and hierarchically arranged in categories called taxonomy. The
effectiveness of teaching is the competence of a teacher, the attributes of instructional process and the teacher impact on pupil behaviour. The growth of all these dimensions of this broad’ and diverse discipline of, teacher education is, like any other discipline, extensive and research savvy, in search of what really contributes to effective teaching.

1.7.2. Effective Teaching

It is very difficult to define good teaching. This term is so value-laden that what appears to be good teaching by one person may be considered poor teaching by another, because each one values differently on the process of teaching - its techniques, outcomes or methods. One teacher may run the classroom in an organized, highly structured manner, emphasizing the intellectual content of academic discipline, while another may manage it in a less structured environment, allowing the students much more freedom to choose subject matter and activities that interested them personally. One observer, because of one’s personal values in favour of more intellectual attainment at the end of teaching, may identify the first teacher as a good’ teacher, while criticizing the second teacher for running “too loose a ship” sheerly to cater for individual interests in the name of education. Another observer may come to the opposite conclusion with respect of which teacher is better again, because of a different set of values that govern one’s choice. While it remains difficult to agree on what constitutes “good” teaching, “effective” teaching can nearly be demonstrated in terms of what is really intended as the outcome of teaching? An effective teacher is able to bring about intended learning outcomes, though the nature of learning is still more important. The two different teachers, as in the example above, may strive for and achieve different outcomes and both be judged effective. The two critical dimensions of effective teaching are intent for achievement. Without intent, student achievement
becomes random and accidental. However, intent is not enough by itself. If students do not achieve their intended learning goals, the teacher cannot be truly effective. Thus, effective teachers may be defined as those who can demonstrate the ability to bring about intended learning outcomes that enable them to achieve the desired results for their students. This, once again, refers to the role performance of teachers via the making of good and effective teachers.

Ryans (1960), puts it in this way: “Teaching can be effective to the extent the teacher acts in ways that are favourable to the development of basic skills, understanding, work habits, desirable attitude, value judgment and adequate personal adjustment of the pupils”. But such a definition is very general and abstract because a teacher’s role may vary in relation to the characteristics of the pupils, to grade level, and to the field of learning, that is, of the subject matter. For example, an aloof academic teacher might be liked by students who are bright and academically minded. But such a teacher is not suited to teach those students who need sympathy and understanding about everything else. Therefore, according to Ryans (1960) effective teaching should be relative to three major sets of conditions:

i) The social or cultural group in which the teacher operates, involves social values which frequently differ from person to person, community to community, culture to culture and time to time;

ii) The grade level and subject matter taught; and

iii) Intellectual and personal characteristics of the pupils taught.

1.7.3. Teacher’ Effectiveness

Teacher’s effectiveness is the ability and the interaction between the physical, intellectual and psychological interest of the students, content matters, ability of the teachers and the evaluative procedures. Teachers have the greatest potential to
influence children’s education. Evidence from teacher’s effectiveness studies indicates that student engagement in learning is to be valued above curriculum plans and materials. Researches on teacher’s effectiveness have yielded a wealth of understanding about impact that teacher ability has on student growth. Students achieve more when teachers employ systematic teaching procedures. Effective teachers are those who spend more time on small groups of pupils and use systematic feedback with students about their performance. Teacher’s effectiveness can be defined as on “act of faith”. The most accepted criteria for measuring good teaching is the amount of student learning that occurs. A teacher’s effectiveness is about student learning. Teachers can present content and skills that will enhance the opportunities for students to learn.

Teachers also have limited control over many of the most important factors that impact students’ learning, including students’ attitudes, background knowledge of the course content, study and learning skills, time students will spend on their learning, their emotional readiness to learn, and on and on. Since there is clearly a shared responsibility between the teacher and the student as to what that student learns, and because many students are able to learn in spite of the teacher, while others fail despite all of the best efforts of a skilled practitioner, the definition of “teacher’s effectiveness” appears to be, “an act of faith” on the part of students and teachers to do their best.

According to Sheela Mangla (2001) “Good teachers show a balance of qualities such as continuous growth for excellence, readiness for guidance; set high value standards so that they can equip the children wisely and effectively; they are purposeful whose energies and values are organized and focused on their teaching work; they are thinkers and constructive workers with intellectual bent for achievements; they warm up the students, appreciate their efforts and encourage them to
work harder; they have a hunger for vividness, for wholeness and completeness in their ideas; they are sensitive and responsive, they have a conscience, are patience and persistently curious”.

1.7.4. Concept of Teacher Effectiveness

The term “teacher effectiveness” will be used to refer to the results a teacher gets or to the amount of progress the pupils make towards some specified goal of education. One implication of this definition is that teacher effectiveness must be defined, not behaviours of teachers. For this reason, and because the amount that pupils learning is strongly affected by factors not under the teacher’s control, teacher effectiveness will be regarded not as a stable characteristic of the teacher as an individual but as a product of the interaction between certain teacher characteristics and other factors that vary according to the situation in which teacher works. Many times, the terms teacher performance and teacher effectiveness are used synonymously. Medley (1982) made an attempt to clear the distinction between teacher performance and teacher effectiveness, saying that teacher performance implies what a teacher does on the job, the ability to apply his competence to his task, at any given point of time and teacher effectiveness includes both teacher performance and its effect on pupils while on the job. Teacher effectiveness concerns only those outcomes that reflect the agency of the teacher and the objectives of education. The most intransigent of difficulties has been to establish teacher effectiveness criteria shown to be related to the teacher personality. In this review, Lomax (1973) concluded that “even if past studies are given credit for helping to clear a little of the ground for future researchers, it must be recognized that very little is known about the relationship between personality characteristics and teacher effectiveness.”
1.7.5. Factors Influencing Teacher Effectiveness

Some of the factors that could have great influence on teacher’s effectiveness apparently would be:

- Psycho-social Maturity
- Locus of Control,
- Organizational conflict
- Intelligence
- Academic background;
- Attitude towards teaching profession;
- Socio-economic status
- Adjustment;
- Age;
- Teaching experience;
- Professional training;
- Gender;
- Level of aspiration
- School climate
- Job-satisfaction

The 21st century will be an era of acute modernization and both teacher and students will have to cope with the changes and challenges. The information society requires a higher level of skill and knowledge of all individuals than did the industrial economy, geared to factory production. Environmental changes are inevitable and therefore a teacher is effective if he/she can adapt to and improve his/her environment. Teacher must be able to increase conceptual understanding and analytical ability among students. They need to be competent in their profession.
1.8. TEACHING COMPETENCY

Teaching competency refers to the application of different teaching skills efficiently during the process of teaching. A competent teacher applies all the teaching skills in an effective way so as to understand the level and nature of students and alters teaching accordingly. Teaching competency involves the utilization of the different teaching skills. Some of the teaching skills are motivation, introduction, presentation, questioning, stimulus variation, reinforcement and closure. All these teaching skills are considered as the core teaching skills. Teacher Trainees are trained to use of these core skills effectively to attain mastery in teaching. Application of these skills makes the prospective teachers to be competent.

1.8.1. DEFINITION OF TEACHING COMPETENCY

Joyce & Well, (1972) define teaching, as a process by which a teacher and students create a shared environment including sets of values and beliefs which in turn colour their view of reality. According to Prakash Srivastava & Anju Bjargava, (1984), teaching is a series of events wherein a teacher attempts to change the behavior of students along the intended direction. A competent teacher possesses teaching skills to employ in a teaching situation in order to drive home to the child a point, an idea or a thought so as to bring about the desired change in the student, (Satish Chand Bhadwal & Manjula Soot, 1991).

Selvam (1996) defined competence as referring to fitness to undertake efficiency to withstand and capacity to excel. Weber (1972) defines competency as ‘the broad sense of knowledge, attitudes, skills and behaviours that facilitate intellectual, social, emotional and physical growth in children. Houstan (1987) stated that teaching competencies are the requirements of a competency based teacher education, which include the knowledge, skills and values the student (the teacher trainee) must demonstrate for successful
completion of the programme. Ashworth (1990) Teaching competency is the ability of the teacher to transmit knowledge, application and skills to the students. Competency does not imply perfection; it implies performance at a stated level. Teaching competency is the ability of a teacher manifested through a set of overt classroom behaviour. Sachdeva (2002) defined teaching competency as an ability to apply to practical situation, the essential principles and techniques of teaching. Anisha (2008) stated that it is the ability of the teacher to make teaching and learning effective and productive by realising the full potential of the teacher and learner and in turn achieving the goals of education. In general, teaching competence is nothing but the performance, ability, or the capacity of the teacher to teach.

Mike Turner & Leslie Bash (1999) have listed the characteristics of a competent teacher. In their opinion; a competent teacher is one who is;

- Professionally committed to promote education and well being of all children regardless of their cultural, ethical or religious back ground;
- Knows their special subject or curriculum area well enough to teach it and informs less knowledgeable colleagues on what and how to teach in that subject;
- Can teach the key ideas and content of their subject in a variety of ways which meet the learning styles of the children with different ability and interest group;
- Can manage children in a quiet and ordered manner in and out of the classroom;
- Can work equitably with children, colleagues, parents, governors and administrators;
- Can encourage the spiritual, moral, social and cultural development of children;
- Is committed to the idea of lifetime professional development for the sake of their students, their school and themselves;
- Can accept the need for continuous change in order to meet the needs of their clients and employers.
Regional Institute of Education, Mysore (1998) identified a list of 51 essential competencies and classified those under 12 areas;

- Development, preparation and utilisation of instructional materials
- Motivation of children
- Communication in classroom
- Methods of instruction
- Evaluation of learning
- Diagnosis and remediation
- Classroom management
- Co-curricular activities
- Community participation
- Special education
- Institutional planning
- Classroom instruction

District Primary Education Programme (DPEP), TamilNadu (Paramasivam 1997) identified the following teacher competencies after conducting workshop at vadalur and Krishnagiri. They are:

- Planning the lesson
- Managing instruction
- Catering to the needs of slow/ gifted children
- Summative evaluation
- Guidance and counselling
- Promoting individual talents
- Innovating methods
- Institutional management
- Establishing inter-school rapport
- Involving community and
- Developing non scholastic skills.

Jeya & Denisia (2013) stated Subject Competency, Content Organization and Presentation, Instructional Strategy, Interactive Competency, Classroom Management as the components of teaching competency.

**Subject Competency**

Pedagogical content knowledge identifies the distinctive bodies of knowledge for teaching. It represents the blending of content and pedagogy into an understanding of how particular topics, problems or issues are organized, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction. Pedagogical content knowledge is the category most likely to distinguish the understanding of the content specialist from that of the pedagogue".

**Content Organization and Presentation**

Content is the textual, visual or aural content. It may also include other things: text, images, sounds, videos and animations. Content of the lesson is the vehicle to achieve the desirable outcomes. The content should be well organized and presented in sequential manner appropriately.

**Instructional Competency**

Instructional strategies include all approaches that a teacher may take to actively engage students in learning. These strategies drive a teacher's instruction as they work to meet specific learning objectives. Effective instructional strategies meet all learning styles and development needs of the learners. Successful instruction may be a result of various features along with sound instructional strategies. Teachers can put a variety of strategies
and techniques into practice by considering the characteristics of the learning context including students’ needs and interests, and technical facilities.

Interactive Competency

For centuries, teachers taught their pupils through lecture and book work. While this method of education can be effective in educating students, the task of learning can be made more enjoyable and easier if the teacher engages in interactive learning strategies. Interactive learning techniques allow students the opportunity to engage with new material as they learn, allowing them to process the information and cement it into their knowledge banks.

Classroom Management

Classroom management is the term educators use to describe methods of preventing misbehaviour and dealing with it if it arises. In other words, it is the techniques teachers use to maintain control in the classroom. Classroom management is one of the most feared parts of teaching for new teachers. Competency in classroom management is an important component in the teaching competency which needs to be addressed.

1.8.2. DEVELOPING THE TEACHING COMPETENCY AMONG PROSPECTIVE TEACHERS

The task of a teacher is closely tied to the nature of the classroom. Today’s classrooms call for teachers to “prepare virtually all students for higher order thinking and performance skills once reserved to only a few” (Darling-Hammond, 2006). Researchers and practitioners are becoming increasingly aware that the 21st century classroom demand innovativeness in teaching and learning process. For which the following teacher competencies have to be acquired during teacher training programme.

1. Knowledge of Students and their Development

1. Understand and appreciate diversity
2. Form constructive relationships with students

3. Connect students' prior learning, life experiences, and interests with learning goals

4. Use a variety of instructional strategies and resources to respond to students' diverse needs.

5. Facilitate learning experiences that promote autonomy, interaction, and choice

6. Engage students in problem solving, critical thinking, and other activities that make subject matter meaningful.

2. Create an Effective Learning Environment

1. Establish a climate that promotes fairness and students

2. Establish a collaborative learning environment

3. Create a physical environment that engages all students

4. Plans and implement classroom procedures and routine that support student learning

5. Uses instructional time effectively.

3. Understand Subject Matter

1. Demonstrate knowledge of subject matter content and skills

2. Interrelate ideas and information within and across subject matter areas

3. Use instructional strategies that are appropriate to the subject matter

4. Use materials, resources, and technologies to provide meaningful learning.

4. Plan and Design Appropriate Learning Experiences

1. Establishes goals for student learning

2. Develops and sequences instructional activities for student learning

3. Modifies instructional plans to meet the needs of all students

4. Uses resources to meet the needs of student.

5. Use On-going Assessment to Monitor Student Learning

1. Communicate learning goals to students
2. Collect and uses multiple sources of information to assess learning
3. Assist students in assessing their own learning
4. Maintain up-to-date records and analyse data
5. Communicate with students and families about student progress.

**6. Develop Professional Practice**

1. Reflect on teaching practice to extend knowledge and skills
2. Establish goals for professional development
3. Meet the responsibilities of a professional educator/PSS Teachers
4. Work with families in supporting student learning
5. Maintain positive relationships with other professionals
6. Work with colleagues to improve professional practice.

After thorough review of the literature related to teaching competency, the researcher had drafted the following components to assess the teaching competency of prospective teachers.

1. Knowledge Competency
2. Classroom Performance Competency
3. Communication Competency
4. Professional Competency
5. Social competency
6. Innovativeness
7. Classroom Management Competency
8. Evaluation Competency
The explanation of the above eight competencies are as follows.

1. Knowledge Competency

   The knowledge competency involves subject matter knowledge, curriculum and pedagogical content knowledge and knowledge of teaching strategies and skills. The subject matter knowledge implies the command over the subject matter, sharing and exchange of subject knowledge, updating of subject knowledge and search for new subject knowledge. The curriculum and pedagogical content knowledge implies the command and application of pedagogical content, curriculum implementation and improvement, updating and sharing of pedagogical content knowledge. The teaching strategies and skills imply knowledge and application of teaching strategies, skills to be used for the content and motivation of student’s learning through different teaching methods.

2. Classroom Performance Competency

   The Classroom performance competency involves the actual performance in the classroom instruction. It is the planning and delivery of work, nature of presentation, analysis, use and organization, the style of explanation and ability to connect the subject matter with the life situations.

3. Communication Competency

   The communication competency describes the way they communicate the ideas and information, the type of communication that is going between the instructions, involves the language proficiency, the clarity of speech, use of unambiguous statements and the different styles used for communication.

4. Professional Competency

   The professional competency includes the acceptance of mistakes pointed out by others, toleration to student’s questions, handling different situations with calm mind,
identifying, understanding and supporting student’s diverse needs. This also involves the intrinsic interest the teacher demonstrates for the variety of opportunity for learning, chance for success, control over work, recognition rewards etc.

5. Social Competency

The social competency involves the awareness of the importance of establishing rapport with student and co-teacher and building trust with student, try to understand the students individually, discuss the progress and problem of pupil with parents, personal support to co-workers and proper communication with everyone involved in this area.

6. Innovativeness

The innovativeness competency includes the use of technology in class room instruction. Here comes the proper use of black board, preparation of new teaching models, developing new teaching methods, utilization of different AV for class room instruction and introduction of new and innovative ideas in the class.

7. Classroom Management Competency

The Classroom Management Competency includes how a teacher effectively manages the things inside and outside the class. Here comes the proper Classroom Management of things while instructing, the proper control over the students while instructing and proper time management. Other than this, it involves coordination and management of co-curricular activities. Recognizing that learning takes place both inside and outside the classroom, student’s all-round development besides academic performance. So it includes planning, organizing and implementation of student’s learning cum co-curricular and extracurricular activities.

8. Evaluation Competency

The evaluation competency includes student’s assessment methods and procedures. It involves the type of evaluation used between and after the instruction, the type of
questions formulated and used, and use of student assessment result, evaluation and review of teaching-learning process.

1.8.3. The teaching competency components model for the prospective teachers

The teaching competency components model for the prospective teachers is given below.

![Diagram of teaching competency components model]

A competent teacher should exhibit knowledge and skill on the above components to judge the students’ capacity and plan the instructional methods and materials effectively. They should be competent to motivate the students to conceptualize
the subject taught, to maintain effective communication in the classroom, able to provide conducive classroom climate, skill in classroom management and able to evaluate the students’ progress to provide feedback. All the above skills involve cognitive processing ability which involves thinking and learning process. A teacher should learn to explore the students’ capacity, attitude, interest and needs. They should also learn about how to impart the prescribed syllabus to the diverse group of learners and to know which instructional methods will be effective. They have to learn about the different measures they have to adopt to assess the student’s progress and provide feedback. To get competency in the above skills every teacher will adopt different learning preferences/learning styles. To learn and to be competent in the teaching skills cognitive processing skills such as sensation, perception, reasoning, problem solving, and judging and thinking styles has a major part. Thus for developing professional competency in teaching, teachers learning styles and thinking styles plays a significant role.

For those who teach and assess students at any level—young children, adolescents, or adults—the theory of mental self-government implies modes of rendering teaching more effective through style differentiated instruction. The key principle is that for students to benefit the most from instruction and assessment, at least some part of the instruction and assessment should match their styles of thinking. We would not advocate a perfect match all the time: Students need to learn, as does everyone, that the world does not always provide people with a perfect match to their preferred ways of doing things. Flexibility is as important for students as it is for teachers. But if we want students to show what they truly can do, a match of instruction and assessment to thinking styles is the key. The following is a list of the various methods of instruction and the styles that are most compatible with these methods. If a teacher wants to reach and truly interact with a student, he or she needs the
flexibility to teach to different styles of thinking, which means varying teaching styles to suit different styles of thought on the part of students.

- Lecture with executive/hierarchical
- Thought-based questioning with judicial/legislative
- Cooperative learning with external
- Problem solving of given problems with executive
- Projects with legislative
- Small-group recitation with external/executive
- Small-group discussion with external/judicial
- Reading with internal/hierarchical
- Reading for details with local/executive
- Reading for main ideas with global/executive
- Reading for analysis with judicial
- Memorization with executive/local/conservative

Teachers thinking style dimension – function - executive, legislative and judicial will help them to plan their instructional objectives. Executive style teacher will frame the problems under rules and directions. This type of teachers develops the students to be more obedient and solve the problems within rules. Legislative type of teachers will plan their instruction in a creative way. This type of teachers will help their students to be more creative, to come up with their own ways of doing things and prefer to decide for themselves. On the other hand, judicial type teachers like to evaluate rules and procedures and analyses and evaluate the existing things or ideas. This type of teachers will plan their teaching by analyzing their student’s inner strength and weakness and plan their instructional objectives within the student ability and level. They also evaluate each instructional procedure to impart quality education. Their thinking style dimension -
forms - monarchic, hierarchic, oligarchic and anarchic also has a greater impact in instructional planning and administration. Their choice of instructional objectives and instructional methods also involves various forms of thinking styles. Likewise, different levels such as global and local also have a significant place in the teaching learning process. Teachers design their teaching learning process depending upon their levels of thinking whether global or local. Similarly, the scope - internal and external thinking style also has its own effect in planning instructional techniques. The teachers’ conservative and progressive leaning dimensions of thinking styles will also help them to understand the instructional procedures that need to be adopted to bring a fruitful achievement among students.

Teachers Learning styles types - enactive reproducing, enactive constructive, figural reproducing, figural constructive, verbal reproducing and verbal constructive also helps the them to plan the instruction, provide variety of learning experiences, to design evaluation procedures for diverse groups and to impart quality education to the heterogeneous learners. Overall, it is brought to the lime light that both thinking style and learning style of a teacher has its own significant impact in teaching learning process. But these two variables are not explored by the researchers in developing teaching competency among prospective teachers. It is a need of an hour to explore this gap as it has significant impact in the teacher preparation programme. It is important to study the thinking style and learning style of prospective teachers and to incorporate it in the teacher training programme to develop teaching competency among prospective teachers. Realizing the need for the above research the present study is undertaken. Review of related literature is presented in the next chapter.