INTRODUCTION

Of all the creations of God - human life is the most sacred. It has two aspects – the biological and the sociological, where the biological aspect of human life is maintained and transmitted by nutrition and reproduction, the social aspect of human life is maintained and transmitted by education. Man is primarily distinguishable from the lower animals because of his edification ability. He is endowed with intelligence; he wants to remain active, energetic and even original. He desires to go ahead. This list of human achievements is very big. How has all this been done? It is only through education. It is education, which promotes his intelligence, enables him to be industrious and ensures his progress.

The human beings living this planet are the products of millions of years of evaluation. Over a huge proportions of those cones – actually, until relatively recently, adaptation challenges were confined to simple necessities like the provision of adequate food, shelter, clothing, safety and means of transmitting the primitive wisdom and skills of the earlier generations to the later ones. The rate of progress in technology and in the comprehension of nature during this vast period has been insufficient to outstrip to any significant degree, the necessarily slow organic-changes brought by evolutionary processes. Now all that has changed; the dizzying pace of cultural progress, we are. The students live in a world that is quite different from the one into which they were born. There is nothing really comparable to these discontinuous in the history of the spices.
Today's students are in enigma. Their growth and development are modulated, moderated and determined, disillusioned, disturbed and damped. They are in a real predicament. If these external forces are in tune with their in-built skills and aspirations, their growth becomes natural and exciting otherwise it gets community. Some of its compulsory aspects like work exercise, social service, scouting, guiding etc., are not found in their implementation.

1.1 Education – its Concept

Education is as old as the human race. Its importance has been realized since times immemorial and it continues right up to this day. It has been accepted as one of the primary needs of every civilized person. This is the only reason why philosophers and leaders of human thought have so eloquently sung its praises in all ages.

Education is important for both – the individual and the society. The working of society is impossible without education or educated persons. In fact, human life begins with education. The fulfilment of needs of human life is possible only through education.

By education man forms a proper attitude towards life. Education shows us many ways by which we can solve the problems of life. Life is full of struggles. Man makes his life successful by proper education. Thus, Education is the cleverest and straight road to achievement, the more the human beings become educated, the finer persons they turn out to be, the better families they establish, the healthier they are, the better work they do and the more progressive and stable in their communities.
Education is a conscious purpose to train the children for fulfilling the responsibilities of adult life. Since, the children have to enter a complicated society when they grow adults; education gives them training for adult life. It develops in them, thinking and reasoning power to fit them to rise to the occasion, when they are forced with the pressing problems of home, community and world. An individual needs training to use his own reason so that thereby he may learn to live orderly life or moral life. True education means training the individual to discriminate between 'good and evil', both on the level of physical responses as well as mental response. In short, education is the training of the intellect, body and spirit; it is training in co-operation, love and sympathy. It is training in correct responses to environmental conditions.

Education occupies a very prominent place in the history and life of a nation. It is the important single factor in the achievement of rapid economic development and technological progress as also in creating a social order based on the values of freedom, social justice and equal opportunity. It is very much essential for the refinement of the cultural life of a society. So long as the educational system of a civilization is sound and comprehensive, it is alive otherwise it would fall into pieces in no time.

Education is not only essential because it performs vital economic functions like job preparation and human capital formation, but it is also required for a number of other reasons like character building, personality development and development of scientific attitude etc.

Education in narrower sense is confined to school and college instruction. It believes that education starts when the child enters the school and ends with the departure from the school or college. The amount of education received by the child is measured in terms of passing the examination and securing a job.
Education in its broader sense includes all knowledge and experience, which tries to develop the child as an integrated and full-blooded human being. As such, education is not teaching of 3 R’s (Reading, Writing and Arithmetic), but it is training of 4 H’s (Head, Heart, Hand and Health). It is not limited to school instruction only. It is the sum total of experiences that the child receives inside and outside the school by different persons and through variety of subjects in the laboratory, library, playground and in the home and society.

In modern times also, education is a great irresistible force, which has taken the entire world in its fold. Education is an activity or a process, which transforms the behaviour of a person from ‘instinctive behaviour’ to ‘human behaviour’. Man instead of acting impulsively, acts rationally.

Therefore, education is one of the most important sub-systems of a society. This sub-system is strategically very important because it generates both finite and infinite power. The quality of power helps in shaking the pattern of society. Where educational institutions turnout capable, intelligent, mentally alert and self-sufficient pupils, society becomes strong and productive.

1.2 Importance of Education

Education and its categories lead us to believe that education is necessary of life, both biologically and socially considered. That is needed for living a better life – a socially desirable life, nobody can deny. It is education which bridges the gulf, the ever widening gulf between the original nature of the immature child and the standards, customs and exacting demands of society which increase with the growth of civilization. Education renews and rebuilds the social fabric and gives social consciousness.
Education carried out its social function through the school as a special environment. It is through and in the school that the development within the young of the attitudes and dispositions necessary to the continuous and progressive life in a society, takes place.

Education directs, guides and controls. The child is born with innate impulses and powers which may not agree with the social standards of the group in which he is born. Education helps considerably in the process of growth or development. In reality, education is growth itself. It is life and life is continuous development. It helps the educand to grow through formation of the habits and sentiments which give control to the child over his environment and the native impulses. Education, moreover, creates a desire for continued growth and development and provides means for its realization.

Education prepares the educand for the responsibilities and privileges of adult life. It makes individuals realized their present possibilities and thus makes them better fitted to cope with the difficulties ahead.

John Dewey ascribes to education a dynamic function. According to him, education is not so much concerned with the unfolding of latent powers from within or with preparing one for a remote future as with constantly reorganizing or reconstructing human experience. Human experience is constantly changing because of the impact of education on human mind. Not only it is a conservative force but it reweaves and vitalizes the social fabric through special agencies like the school.

1.3 Meaning of Teacher Education

According to Monroe Encyclopaedia of Educational research “Teacher education refers to the totality of educational inputs which contribute to the preparation of a person for a teaching position in school”. But the term is
more commonly employed to designate the programmes of courses and other experiences offered by an educational institution for the announced purpose of preparing persons for teaching and other educational services.

Kilpatrick, the famous American educationist once remarked, “One trains circus performance and animals, but one educates the teachers”, consequently the new term “Teacher Education” has been adopted replacing the term ‘teacher training’.

Teacher education is not mere pedagogy or acquisition of a training qualification. It is preparation of persons for family, for society and for the country. It is nurturing of creativity, inculcation of commitment and generation of a strong will to contribute at the highest level of efficiency through a value-based approach. Teacher education is a process of unearthing the treasure within every teacher and subsequently within every learner in each and every learning centre. It is the process which makes the individuals realizes the magnitude and potentialities which, if nurtured and inculcated in the right direction, could make significant contribution to the identified sectors.

1.3.1 Need and significance of Teacher Education

Teacher education is needed for kindling the initiative of the teacher, for keeping it alive, for removing the evils or ‘hit and miss’ process, for according a process, for according a professional status to the teaching profession and above all for making the optimum use of time and energy of the teacher and the taught.

The Education Commission (1964-66) observed: “a sound programme of professional education of teachers is essential for the qualitative improvement of education. Investment in teacher education can yield very rich dividends because the financial resources required are small when measured against the resulting improvement in the education of millions”.
NPE’86 calls for the overhaul of teacher education becomes a core condition to ensure high proficiency and quality school education. In other words effective school education anticipates effective teacher education.

1.3.2 Effective Teacher Education

Education is a process of human enlightenment and empowerment for the achievement of a better and high quality of life. A sound and effective system of education results in the unfoldment of learners potentialities, enlargement of their competencies and transformation of their interest, attitudes and value.

Recognizing such an enormous potential of education, all progressive societies have committed themselves to the Universalisation of Elementary Education with an explicit aim of providing ‘Quality Education for All’. They have also recognized the significance of secondary education, gradually reaching to a near universalisation level and simultaneously improving its quality for effective empowerment of as many more learners as possible in order to achieve advancements in socio-economic and other domains of life. School education can be provided in the present times to practically all members of the society and therefore, its quality and efficiency assume special significance within the larger framework of personal, social and national development.

In this context, effective teacher education has crucial role. In fact, it becomes a core condition to ensure high proficiency and quality of school education. In other words, effective school education anticipates effective teacher education.
Teachers can act as trail-blazers in the lives of learners and in the process of education for development. If teachers acquire professional competencies and commitment, and if they are enabled and empowered to perform their multiple tasks in the classroom as well as in the school and the community in a genuinely professional manner, then a chain reaction can begin—starting with a sound teacher performance and culminating into a high quality learning among increasingly more students in cognitive, affective and psychomotor areas of human development.

There was a time, especially during the pre-independence period in India, when teacher education was just a single shot event. But this one-in-a-lifetime model is quite inadequate in the post-independence period, particularly in the modern times. In the last decades of the twentieth century, both school education and society have witnessed unprecedented technological advancements, communication revolutions, periodical reforms in school curriculum, introduction of competency-based and value-oriented education, adoption of Minimum Levels of Learning (MLL) strategy as envisaged by National Policy on Education (NPE) 1986 (modified 1992), major reforms in textbooks and other teaching-learning aids, promoting activity-based and joyful learning, introduction of self-learning and group learning activities besides teacher-directed learning, offering non-formal and alternative education systems, initiatives like Operation Blackboard (OBB), Special Orientation Programme for Teachers (SOPT), Promoting primary and Elementary Education (PROPEL) and a host of other developments.

Clearly, all these and many other changes occurring in quick succession in school and society, coupled with new challenges to be faced in the initial decades of the twenty-first century, which also marks the dawn of a third millennium, has profound implications for the renewal of curricula, content and processes of teacher education. If teacher education has to remain
effective and functional, its curriculum and related aspects should be revamped and renewed urgently. What is more, effective teacher education for both elementary and secondary stages of education has now to be conceived with a more comprehensive paradigm encompassing a number of inter-related components such as the following.

1.3.3 Pre-Service Teacher Education

Before a teacher is into the teaching process, acquisition of necessary understanding of the sociological, philosophical and psychological principles is an essential pre-requisite. Every teacher must have a thorough understanding of the context; the learner’s needs the community expectations and the basic objectives of a particular stage of education. Besides gaining an insight into the fundamentals and foundations of education, various techniques and strategies of curriculum transaction have to be learnt by the teacher. Even more significant would be the teacher’s capacity to ensure that practically every child attains the level of mastery in the competencies identified in the curriculum. The teacher must be prepared to identify learner difficulties and design remedial as well as enrichment measures ensuring that no child remains neglected.

The need for taking care of social justice and equity is being felt more than ever before. This is essential for national development as every section of society, no matter however deprived it has, been in the past, has to participate effectively and equally to contribute its share to the development process. Universal elementary education of high quality alone can contribute significantly in achieving this objective. Pre-service education of teachers needs to be geared to this vital task by preparing a high degree of proficient professionals for teaching and learning. Besides distinguishing itself by the rigour of the training process, the duration of the programme, the relevance of
the content and critical role of practicum, it has also to develop desirable qualities and professional values among new teachers in order to help them discharge their all-round duties to the school, the society and the nation honestly.

Pre-service professional education is a process of transformation of a lay person into a competent and committed professional practitioner. According to Dr. R.H. Dave, "Teacher education at elementary stage is a process of initial empowerment and continuing re-empowerment of professional practitioners for the purpose of generating competency based teaching at the level of mastery in practically all the children by adopting suitable aids, activities, motivational devices and evaluation procedure. This definition highlights practically all the critical ingredients of teacher education, general as well as specific to the stage. In operational terms, it would lead to professionalism of a high degree and if translated into action in letter and spirit at the implementation stage, it would lead to the development of requisite skills, attitudes and values for imparting successful learning and teaching experiences characterized by practicability, relevance and acceptability.

The level to which professionalism is achieved is a matter of immediate concern. Consequently, the major task is how to raise this level of professionalism? The role model syndrome that the new student teacher bring to the teacher education institution on the basis of his/her experiences as a student in primary and secondary (or, for that matter, in university, as the case may be), has to be re-examined and modified in the process of pre-service teacher education. Further, teacher educators themselves are expected to provide a role model which acts as an important influencing factor in the transformation of the lay person into a trained professional. In addition, teachers of practice teaching schools and other such educators, with whom she/he interacts during pre-service training period, act as a third important
factor in the process of transformation. All these are also influenced by the teacher preparation curriculum which includes an intensive study of educational theory, acquiring educational practice in the classroom, school and outside, under the guided supervision of teacher educators and developing appropriate attitudes, values and commitments.

The cumulative and interactive impact of all these processes and materials contributes to the transformation of a person, entering the programme of initial teacher education into a competent and committed professional educator. This process of transformation is the crux of the entire educational process and its quality is directly linked to the quality and efficacy of institutional functioning at the respective stage. When teachers are prepared for elementary or secondary school level, there are certain specific tasks for the student teachers, relevant to the stage concerned, which deserve special consideration and attention in the process of their preparation as teachers during pre-service teacher education, which, in turn, need to be continually stressed as part of their in-service programme later on as regular school teachers as well.

Pursuant to the provision of NPE-1986 on teacher education, a centrally sponsored scheme of restructuring and reorganization of Teacher Education was approved in October 1987. One of the five components of the scheme was establishment of District Institutes of Education and Training (DIETs). In a phased manner all the Teacher Training Institutions were upgraded as District Institutes of Education and Training from 1987-88 to 1989-90

- DIETs Mission and Role

A DIET's mission could be briefly stated in the following terms:

"To provide academic and resource support at the grass-root level for the success of various strategies and programmes being undertaken in the areas of elementary and adult education".
A DIET has 3 main functions viz:
(i) Training (pre-service and in-service)
(ii) Resource support (extension/guidance, development of material, aids, evaluation tools etc.) and
(iii) Action research

In consonance with the norms of NCTE, the curriculum of TTI was revised, in place of one year TTC course a two year Diploma in Education (D.Ed) was introduced Vide GO.Ms.No.35, Education (SE, TRG,.. III) Dept. dt.9-9-99 with effect from the academic year 1999-2000 in Andhra Pradesh.

Every district in Andhra Pradesh has a DIET. The intake is 100 per each DIET. The medium of instruction is Telugu, in certain DIETs there is a parallel Urdu, Tamil Medium section with an intake of 50.

1.4 CREATIVITY – Concept and Meaning

Creativity is the key to education and the solution of mankind’s problems. It is an important factor in leadership in any field viz., business, engineering, technology, education, politics, agriculture, industry etc. Creativity is a process extended in time and characterized by originality, adaptiviness and realization.

Creativity acts as a determinant for a nation’s progress. Creativity is one of the most highly valued human values. Creativity affects not only the scientific progress but also society in general. Those nations, which learn best how to identify, develop and encourage creativity in their people, may find themselves in a very advantageous position. For a nation to survive in the international competition it must utilize its creative talent to the highest possible extent.
Creativity can be regarded as not only a quality found in exceptional individuals but also as an essential life skill through which people can develop their potential to use their imagination to express themselves and make original and valued choices in their lives. Societies of the 21st century require active participation in the fast changing ‘knowledge age’ in which there is an interaction between people, communities, creative process, knowledge domains and wider social contexts.

The National Advisory Committee on Creative and Cultural Education (NACCCE) draws upon a range of conceptualisations of creativity and presents a definition which is a useful framework for educators – ‘imaginative activity fastens so as to produce outcomes that are both original and of value’. This definition is helpful in that it expresses five characteristics of creativity: using imagination, a fashioning process, perusing purpose, being original and judging value.

Creativity in education can encompass learning to be creative in order to be creative in order to produce work that has originality and value to individual, peers and society, as well as learning to be creative in order to support possibility thinking in making choices in everyday life.

The term ‘CREATIVITY’ had been designed in a wide-ranging ways. These include descriptions of creative process as ‘spiritual paths’ or a seeming mystery and paradox which needs to be tamed in order to be underscored as the computational psychology of artificial intelligence or reflected in neurological processes.

1.4.1 Creativity in Individuals

A useful starting point for considering frameworks for creativity is to consider characteristics in individuals. Examples of personal qualities of creative individuals have been collected by Shallcross (1981) and described
as: openness to experience, independence, self-confidence, willingness to take risk, sense of humour, enjoyment of experimentation, sensitivity, lack of feeling of being threatened, personal courage, unconventionality, flexibility, performance of complexity, goal orientation, internal control originality, self-reliance, persistence.

Another perspective on the personal qualities of creative individuals is described in Sternberg and Lubart (1999) 'Confluence Model' in which six resources converge: intellectual abilities, knowledge, styles of thinking, personality, motivation and environment. Gardner (1996) presents a pluralist theory of mind which recognizes multiple intelligence in individuals.

Csikszentmihalyi (1996) identifies a common characteristic of creative people as 'flow' the automatic, effortless. Yet highly focussed state of consciousness when engaged in activities, often painful, rising or difficult which strikes a persons capacity whilst involving an element of novelty or discovering. He elaborates the description of this characteristic in identifying NINE elements which such activity provides. They are:

- Clear goals
- Immediate feed back
- Balance between challenges and skills
- Merging of action and awareness
- Elimination of distractions
- Lack of fear or failure
- Lack of self-consciousness
- Distortion of sense of time and
- Automatic activity (enjoyment for its own sake)
1.4.2 Place and role of Creativity in Education

'Creativity' is an essential life skill, which needs to be fostered by the education system(s) from the early years onwards. Such a statement emphasises the importance of playfulness, imagination and creativity in learning for children, young people and adults and the role that schools might play in promoting these qualities in learning experiences.

Since the late 1990s, creativity in education has been viewed as globally relevant in ways never seen before. Torrance (1995) noted the changes in creativity research and called it 'A Quiet Revolution'. The revolution has created challenges and caused change, including a greater emphasis on promoting creativity of students and rewarding the creativity of the teachers. Focusing on teachers, Torrance (1995) called creative teachers are great teachers who are 'involved in discovering, pursuing the limits, taking a step into unknown and engaging students in the process. This increased emphasis on creativity, especially in education can be linked to 'sputnik shock', a time after the Russian Sputnik Spacecraft was launched. Educators in the United States suddenly realized American Students were falling behind. More specifying, students were being taught to apply only what they had already learned. As a results of the launching of Sputnik, the educational application of creativity and creative testing explored onto the research horizon.

The development of different perspectives in describing creativity has been traced from the concerns of the 1950s to 1970s in the areas of personality, cognition and the stimulation of creativity in individuals to the awareness in the 1980s and 1990s of the influence of environments and social contexts on the creativity of individuals, groups and organisations.
Cropley (2001) reviews a range of attempts to classify creativity from Guilford's address to the American Psychological Association in 1949 in which he called for attention to 'divergent thinking' in human psychology to the imperative to consider the role of creativity in successful technological and economic ventures after the shock to the Sputnik launch. He identifies common elements to the variety discussions of creativity – novelty, effectiveness and ethicality.

1.4.3 Barriers of Creativity

No standard dictionary seen to have defined this term. But, it is generally accepted that the purpose of creativity is to achieve a tangible representation of what the mind’s eye can see- the translation of ideas and impressions into words, pictures, music forms. Throughout this, the creator gains personal joy, satisfaction, even perhaps, ecstasy. And, in all probability, he also creates enjoyment for all those who see, read or hear it. Therefore, creativity is the capacity which leads to innovations in sciences, humanities, performances in fine arts or originating new thoughts. For centuries, creativity was conceived as a divine gift, as a life force and as a cosmic force, whereby the creator was supposed divinely inspired. According to this view, creativity springs from inspiration rather than education. Of course, a great deal of mist surrounds the world of creativity. Some compare it with ‘love’, some with ‘happiness’, some with ‘jazz’ and some with ‘maya’. Since creativity is an infinite phenomenon and a person can be creative in an endless number of ways, there is no wonder that it means many different things to many different researchers.

Decades of research on creativity have resulted since Guilford’s 1950 address, Creativity have driven by a side array of theories and models. Assessment of creativity has been attempted for almost 60 years and yet, research cannot agree on one concept or definition of creativity. Hocevar (1981) suggested the most apparent challenge associated with measuring
creativity is the absence of convergent validity among the multiple assessments methodologies. He also suggested creativity assessments should be correlated in order to establish convergent validity.

Research on teacher creativity appears to be limited, while some may suggest that creative teaching is effective teaching, concrete measures that definite creative teachers appear to be lacking in the literature.

**Cropley** (2001) explained that creativity offers classroom approaches that are interesting and thus seems to be more efficient way of fostering learning and personal growth of the young. Creativity helps children learn to develop.

**Sternberg** (2005) stated that ‘... to the extent that creativity is in the interaction of person with context we need to concentrate as well as on the attributes of the individual and the individuals work relative to the environmental context’. With this in mind, perhaps education offers the greatest potential for creativity research.

**Bleedron** (2005) stated that – teachers of excellence and insight who go beyond the established curricula are likely to recognize special creative-thinking talent in students and provide opportunities for their recognition and reward. Such teachers will be the ones who will be remembered for a student’s life time, with gratitude for their mentoring.

### 1.4.4 Definitions of Creativity

The concept of creativity has different meanings and interpretations for different people. At one place **Guilford** (1965) observes, “Creativity like ‘love’ is a many splendour thing. Small wonder that few have ventured to define it”. At a conference on creativity in 1965, each of the thirty members was asked to write a list of his free associations to the word ‘creativity’. The results were almost varied as the personalities of those present.
However, according to Webstrerians, the word 'CREATIVITY' has been derived from the Latin term ‘CREARE’ which means to create. To create, for them, is to bring some new form of character as work of thought or imagination. Creativity for Plato is bringing something new into reality.

According to Passi (1971), creativity is a multi-dimensional attribute differentially distributed among people and includes chiefly the factors of solving problems, fluency, flexibility, originality, inquisitiveness and persistency. Creative thinking is accepted to be marked by the action of mind purposefully directed to manipulate the environment with a view to create new ideas and establish novel patterns and relationships.

According to Torrance (1962), 'Creativity is a process of becoming sensitive to problems, difficulties, gaps in knowledge, missing elements, disharmonies and so on; identifying the difficulty, searching for solution, making guesses or formulating hypotheses and possibly modifying and testing them and finally communicating the results'.

Desmukh (1984) states that creative imaginations integrate different parts and mould them into a new unity. It is an attempt to perceive unity in diversity; to create order and beauty out of chaos. It is the ability to suggest new hypotheses which open vast and new avenues of thought.

So, to conclude, it can say that creativity is an innate quality of original thinking in contributing new things to human world.

The following few definitions on creativity is given for the better understanding the concept.
Creativity is a mental and social process involving the generation of new ideas or concepts. Creativity is fuelled by the process of either conscious or unconscious sight.

The process of developing new, unknown or unique ideas. The federal definition of giftedness identifies creativity as a specific component of giftedness.

Creativity refers to the act of generating new and useful ideas or of re-evaluating or combining old ideas, so as to develop new and useful perspective in order to satisfy a need.

Creativity generates and / or recognizes how best practice and imaginative ideas can be applied to different situations.

Creativity is the production of previously non-existent information. All new items of information are based on proceeding ones and these are 'new'.

Creativity is the degree of innovation and dynamism.

Creativity is the experience of thinking, reacting and working in an imaginative and idiosyncratic way which is characterized by a high degree of innovation.

Creativity is the ability to produce something new, to generate unique approaches and solutions to issues or problems or opportunities.

1.4.5 Importance of Creativity in Education

Regarding the importance of creativity, it can be said that education has sound legitimate reasons and concerns about all aspects of creative talents, its nature, assessment, nurture and utilization.
Conant (1944) stressed that the potential talent of a country should be recognized at an early age and should be given adequate opportunity for development. Taylor and Holland (1964) emphasized that one of the greatest potential strength of our nation lies in fostering creativity in the education of children. According to Guilford, creative education aims at self-starting, resourceful and confident person who is ready to face personal, inter-personal and other problems. Because he is confident, he is also tolerant where there should be tolerance. A world of tolerant people would be one of peaceful and co-operative world. Thus, creativity is a key to education in its fullest sense and to the solution of mankind’s most serious problem.

The goal of education in terms of increased capabilities, personal expression, greater inventiveness and blossoming of gifted leaders cannot be fully raised in the absence of adequate knowledge of creativity. Tynbee (1962) has pointed out that, although the United States has been made as a great country by a series of creative minorities, we now tend to neglect and suppress such minorities. He warns that the creative minorities and majority must be in tune to establish understanding, confidence and co-operation among them. A new role for education might be the development of the skills and conditions needed for such rapport. Torrance (1962) too has recognised the importance of guiding the growth of creative thinking abilities among children for reasons of ensuring their mental health, fully functioning personality, educational achievement, vocational success, social importance and for providing different roles.

Mackinnon (1962) remarked that it is the educator’s and psychologist’s task to recognise creative talent before it has come to expression. He further indicates that creative talent needs to be discovered when it is still potential and that an educational climate which will facilitate its development and expression needs to be provided.
Kheiralla (1963) pointed out that the present emphasis in education has shifted from the individual who is merely a cautious, accurate and critical thinker to the person who displays new insight, fresh ideas and original procedures. This view is also supported by the statement of Taylor (1963) that educators should conceive students as thinkers, producers and creators, rather than solely as learners.

Understanding, measuring and developing the creative thinking ability of students is a part of the educator's dream of achieving a more human kind of education in which every child will have a better chance to achieve his potentialities.

It was observed in the report of Education Commission (1964-66) that the quantitative expansion in secondary education has mercilessly drafted the quality of education and the schools have failed to enrol large proportion of talented students who could not study further of social or economic handicaps. The Ministry of Education, Government of India, being convinced of the utility of talent for bringing about rapid progress has started a scheme, “National Talent Search” by conducting examinations and through aptitude and intelligence tests. The nation cannot afford to neglect any aspect of creative talent, its nature, assessment, nurture and utilisation which is the only hope of millions of people living below poverty line.

Creativity is an asset to the nation, which needs creative scientists, engineers, technocrats, economists, poets, painters, musicians, inventors and discoverers, who will accelerate the development, enrich its culture, adding to the sum total of the happiness and prosperity of its people. All development, in every sphere of activity in the nation, springs from the way creativity is fostered and encountered among the boys and girls in our schools today.
Creativity, thus, for a long time thought to be a divine gift and as such afforded little scope for scientific study. Today, this view has changed. Considerable amount of research seems to have been undertaken in the area of creativity during decades and it is now accepted that creativity exists in every sphere of human activity.

1.5 Competency

Competency is a term used extensively and hence, it is needless to say that, it is defined in different ways. Teacher education and job performance of teacher is one of the contexts in which the term is used. Several researchers have attempted to define this term.

Houston (1987) stated that “Competencies are the requirements of a competency based teacher education, which includes the knowledge, skills and values the students must demonstrate for successful completion of the programme”.

According to DPEP, Tamilnadu (1996) teacher competence refers to “the right way of conveying units of knowledge, application and skills to students”. The right way here includes knowledge of content, processes, methods and means of conveying content in an interested way, involving the activities of the students. Hall and Jones (1976) viewed competencies as less abstract than goals and objectives as more specific than competency. Teacher competencies have their super-ordinate and sub-ordinate relationships as shown below:

Role / Function → Task → Subtask → Competency → Sub competency → Skill → Sub skill → Unit behaviour

The said analysis is predominantly behaviouristic. It may not be wrong to say that the idea of competency and its development is based on the behaviourist approach.
At this point it is useful to introduce yet another meaning of the word ‘competent’, expressed in the *Oxford English Dictionary* as ‘... sufficient in amount, quality or degree’. According to circumstances this can have the positive meaning of ‘getting the job done’ or the negative meaning of ‘adequate but less than excellent’. Thus one might be pleased to have any ‘competent’ lawyer for relatively routine task, but more discriminating for a particularly difficult and important brief.

Finally, we should note a useful distinction in the American Literature between the term, ‘competence’, which is given a generic or holistic meaning and refers to a person’s overall capacity and the term ‘competency’, which refers to specific capabilities.

**Elkin** (1990) adds yet another perspective to this issue when he defines competencies of the kind used in competency-based training systems as ‘micro-competencies’. For further up the occupations hierarchy in an organization the more important that underlying macro-competencies and the less important the micro-competencies.

1.5.1 Competence and Competency

It is noticed a useful distinction in the American literature between the term ‘competence’, which is given a generic or holistic meaning and refers to a person’s overall capacity and the term ‘competency’, which refers to specific capabilities.

Competency is a term used as much by the laymen as by the researchers and scholars. Hence, the term has come to connect different meanings to different persons. An analysis of the meanings is made here with a view to arrive at a definition of the term.

Competency defined in the context of teacher education was stated as “knowledge, skills and values the student-teacher must demonstrate for successful completion of programme”.

A part from the above definitions, competency has also been hierarchically represented in the context of a job and teacher education, job taken as a context at the broader side, represents the various duties a teacher undertakes in order to perform a function. The duties, which are large segments of work done serve as broad categories within which, tasks can be placed. Whereas, tasks that are units of work activity, when further fragmented, would identify specific abilities also termed as competencies.

Short (1984) describes this as deriving from a conception of competence as the command of pertinent knowledge and/or skills, the word ‘command’ being used to imply that the competent person not only possesses the requisite competencies but is also able to use them.

Australian work on competency standard for the professions (Gonzi et.al., 1993) has adopted a similar approach with somewhat greater clarity of definition. They first use the word ‘competence’ in a holistic sense, nothing that Performance is what is directly observable whereas competence is not directly observable, rather than it is inferred from performance.

1.5.2 Competency types and categories

In an article titled ‘Competency Based Teacher Training Programmes’ published by the DPEP, Tamilnadu (1996), competencies of a teacher have been classified as –

i. Classroom competencies

ii. Competencies related to administration and management

iii. Competencies in relation to school, society, colleagues and pupils

iv. Competencies in relation to content and curriculum

v. Motivational and Value based competencies
NCTE, in its documents 'Competency Based and Commitment oriented Teacher Education for Quality School Education' (1998) listed ten competency categories. They are:

i. Contextual competencies  
ii. Conceptual competencies  
iii. Content competencies  
iv. Transactional competencies  
v. Competencies related to other educational activities  
vi. Competencies to develop teaching learning material  
vii. Evaluation competencies  
viii. Management competencies  
ix. Competencies related to working with parents and  
x. Competencies related to working with community and other agencies.

1.5.3 **Characteristic features of Competency**

A study of the meaning attributed to the term competency or meaning with which it has been used in literatures pertaining to teacher education, reveals that certain common characteristics are applicable to competency. These characteristics are:

i. Competency consists of one or more skills, whose mastery would influence the attainment of the competency.

ii. Competency has its linkages with all the three domains under which performance can be assessed. It spans the domains of knowledge, skill and attitude. Even though the skilled performance of a teacher is closely associated with his competence, such a performance would have knowledge and experience based on a favourable attitude.
iii. Competencies, since have a performance dimension to them, are observable and demonstrable.

iv. Because the competencies are observable, they are also measurable. It is possible to assess competency from the performance of a teacher. It is not necessary that all competencies of a teacher have the same extent of knowledge, skill and attitude. There may be competencies which have a prior part of its pertaining to knowledge than to skill and attitude. Some have referred to such competencies as cognitive competencies where as, there may be competencies which are skill performance loaded. In this work, competencies which have predominant part of skills have been considered. A reason being that such competencies are not divided of knowledge and attitudinal dimensions and those they are more closely linked to the performance assessment of a teacher to his job analysis.

1.5.4 Competency in Teaching Profession

'Teacher Competency' refers to the behaviour of a teacher while teaching a class (both inside and outside the classroom). Teacher performance is differing from teacher competence. It is defined in terms of teacher behaviour, of what teacher does, while teacher competence is defined in terms of what the teacher's pupils do, teacher performance resembles that teacher competence is that it too is a product of the interaction between certain teacher characteristics and the teaching situation. Teacher performance is often used as a basis from which teacher competence can be inferred.
'Teacher Competence' refers to the set of knowledge, abilities and beliefs a teacher possess and bring to the teaching situation. Teacher competence differs from teacher performance and teacher effectiveness in that it is a stable characteristic of the teacher does not change appreciably when the teacher moves from one situation to another. It resembles teacher performance in that it has also been proposed as a basis from which teacher effectiveness can be inferred.

By teaching competency the investigator means the ability to handle the subject effectively by incorporation of the following components and dimensions in his/her teaching.

(a) **Knowledge Component**:- It includes content and knowledge dimensions.

(i) Content dimension refers to mastery over a specific subject.

(ii) Knowledge dimension refers to the sound knowledge education by the teacher. Thus knowledge competency is a dimension that specifies the cognitive understanding the teacher is expected to demonstrate.

(b) **Performance Component**:- It refers to the ongoing teaching behaviour as performed in the classroom. It includes the dimensions of clarity, organization, communication and teaching-learning material.

(i) Clarity here refers to the clear presentation of the subject.

(ii) Organization refers to the logical arrangement of the presentation.
(iii) Communication refers to the verbal and non-verbal expressions.

(iv) Teaching-learning material refers to the teaching aids as well as the effective use of them by the teacher.

(c) **Behaviour Component**: It includes the rapport and personality dimensions of the teacher.

(i) Rapport refers to the close relationship between teacher and his/her students.

(ii) Personality refers to the qualities of the teacher in moving with his/her colleagues and taking care of the learners.

(d) **Consequence Component**: It refers to the outcome produced by the teachers in the form of students’ performance in Education.

Teacher training is a major component in the effort towards equality improvement in primary education under DPEP / SSA. Underlying this is a belief that a primary school teacher who is competent is an essential factor in quality improvement compared to the pre-independence period in India. The concerns under the National Policy of Education (1986) and the national efforts through the DPEP / SSA have highlighted the need for systematic and rigorous teacher training to ensure teacher competence to meet enlarging demands on him. However, in the absence of a valid understanding of the competencies essential for a primary school teacher and the effect of related factors such as psychological, sociological and personal factors on Teaching Competency of primary school teacher.
1.6 Intelligence - Meaning

No two individuals are alike: Some may be bright, others are averages and some others are dull. Since man is a product of his heredity and environment, the answer lies with either of these factors or with both. Many attempts have been made to these questions from the very beginning of the knowledge. Teacher has to face such differences in the class room and has to adjust his teaching accordingly. Therefore, it is necessary for him to know about the world of intelligence and its management. So long as controversy existed as to what was meant by intelligence, no test could truly and refined the term intelligence in different ways.

Human intelligence has evolved steadily over the course of thousands of generations without drastic change in the environment. However, the challenges we face in the modern society have the independent domain of intelligence to assume the roles that other domains would have played in the primitive environment in which we evolved. There are clear generic links that predispose people to have a larger cerebral cortex, allowing them to better deal with the challenges of the expanded workload, modern life puts on our intelligence domain. Evolution has not yet had a chance due to human circumvention of natural selection.

General intelligence can be described as the ability of an individual to acquire and apply knowledge. Since our environments are abstracted a greater importance has been placed on cognitive ability and intelligence to allow us to function in modern society. The human race provides some clues as to how this might happen. It seems that human intelligence is heavily dependent upon society for its development.
Human intelligence has evolved steadily over the course of thousands of generations without drastic change in the environment. However, the challenges we face in the modern society have forced the independent domain of intelligence to assume the roles that other domains would have played in the primitive environment in which we evolved. There are clear genetic links that predispose people to have a larger cerebral cortex, allowing them to better deal with the challenges of the expanded work load, modern life puts on our intelligence domain. Evolution has not yet had a chance to catch up to the rapid progress we have made as a society and might not due to human circumvention of natural selection.

General intelligence (g) can be described as the ability of an individual to acquire and apply knowledge. Many studies have shown that ‘g’ is at least 50 percent heritable and thus, can be down from generation to generation. The migration of people to all areas of the earth along with the industrialization of modern society has abstracted modern man from our ancestors. Since our environments are abstracted, a greater importance has been placed on cognitive ability and intelligence to allow us to function in modern society. If one accepts that the ability to choose or construct actions that further one’s goals in complex, extended, open-ended and social situations, is an appropriate characterization of intelligence then this will have consequences for how such an intelligence can be brought about. The human case provides some clues as to how this might happen. It seems that human intelligence is heavily dependent upon society for its development.

E.L. Thorndike maintained that there are three Intelligences viz., abstract, mechanical and social. In Harper’s magazine article in the 1930s, he defined social intelligence as the ability to understand others and act wisely in human relations. He maintained that social intelligence is different from academic ability and a key element in what makes people succeed in life. But beyond that general characterization of social intelligence, Thorndike didn’t have much to say.
1.6.1 Classification of Intelligence:

Intelligence, the dictionary says is “the capacity to acquire and apply knowledge”. A number of definitions have been evolved by psychologists according to their own concept of the term intelligence. Being dissatisfied by the number of definitions and their interpretation, Boring defined – “Intelligence is what intelligence tests test”.

David Wechsler (1958) gives us a good start. He defines intelligence as “the global capacity of the individual to act purposefully, to think rationally and to deal effectively with the environment”.

a) Vernon’s Classification of Intelligence:

Vernon classified all the definitions under three broad categories such as biological, psychological and operational.

i. **Biological approach**: Intelligence according to this approach is one’s capacity to adapt relatively in new situations of life.

ii. **Psychological approach**: The second category of definitions, according to Vernon is Psychological. Few of the definitions advanced by experts contained is a clear commitment about the relative effects of hereditary and environmental influences in the development of intelligence.

iii. **Operational approach**: The third category of definitions of intelligence is operations. Operational definitions are important to understand the concept of intelligence in clear and definite terms. It is defined by giving the conditions for the truth of a sentence in which the term occurs. Such definitions are called operational, for they frequently state, what must be done in order to make certain observations.
b) *Freeman's Classification of Intelligence*:

Freeman, though, classified all definitions of intelligence into three categories but his approach differs from Vernon.

i. **Adjustment or Adaptation ability**: The definitions of this category lay emphasis on the adjustment ability of an individual to his environment. The individual is thought intelligent in proportion to his ability to adjust to new situations and problems of life. The person who is intelligent has no difficulty in the adjustment. The definition, given by Stern, comes under this category. He defined intelligence as a general capacity of an individual, conclusively to adjust his thinking to new environment.

ii. **Ability to learn**: The definitions of this category emphasise the importance of an individual’s ability to learn. Learning ability is an index of one’s intelligence. Buckingham says, “Intelligence is the learning ability”.

iii. **Ability to carry on abstract thinking**: This category of definitions says more emphasis on the effective use of concepts and symbols in dealing with situations, especially, presenting a problem to be solved through the use of verbal and numerical symbols.

c) *Thorndike's Classification of Intelligence*:

E.L. Thorndike has classified intelligence into three categories which are as follows:

i. **Concrete Intelligence**: Concrete intelligence means intelligence in relation to concrete materials. It is the ability of an individual to comprehend actual situations and react to them adequately.
ii. **Abstract Intelligence**: It is the ability to respond to words, numbers and letters etc. All tests of intelligence which require manipulation of symbols are tests of abstract intelligence.

iii. **Social Intelligence**: Social Intelligence means ability of an individual to react to social situations of daily life. Social intelligence would not include the feelings or emotions aroused in us by other people, but merely our ability to understand others and to react in such a way towards them that the ends desired should be attained. High social intelligence is possessed by those who are able to handle people well. Adequate adjustment in social situations is the index of social intelligence.

1.7 **Need for the Study**

Teacher occupies a vital position in educational system in whose hands lies in the task of shaping the students. Teacher being the pivot of the educational institution provides the key to the educational system. To be effective teacher he/she should be creative and democratic in approach. A creative teacher is an accepting, tolerant and humanist who will allow the students to develop their maximum. Such a teacher represents the originality of children by giving them credit for initiated learning and thinking and by allowing them to learn through creative problem solving activities.

Teachers have always played a crucial role in preparing communities and societies towards exploring new horizons and achieving higher levels of progress and development. They are the prime agents of change. Professionalism in teacher education has been a matter of concern and attention in India, particularly during the last five decades. The national policy on education 1986 / 2005 clearly recognizes this and stipulates 'the status of the teacher reflects the socio-cultural ethos of a society'. It is said that no people can rise above the level of its teachers. The Government and the community should endeavour to create condition which will help,
motivate and inspire teachers on constructive and creative line. Teacher is supposed to be the guiding agent for the learner's personality, a catalyst that accelerates development and growth. A single teacher can encourage or discourage, promote or prevent and enhance or impede the development of hundreds of children.

It is desired that a teacher should have an insight into the creative behavioural symptoms of the students under this change. This prompts one to believe that the creative traits of the teacher and the creative character of personality are implicitly important in shaping and sharpening the behaviour and personality of the learner. Teaching involves the personal values, ideals, interests and attitude of teachers whether employed consciously or otherwise. Teachers' behaviour has a profound influence on his/her pupils. Teacher in whose hands lay the task of shaping student, should possess good teaching competency as well as intelligence. A creative teacher can be perfect only when he teaches effectively.

Teacher trainees will be the teachers of the future generation. The progress and prosperity of the nation depends upon the future generation. Teacher trainees should be equipped to recognise that children possess special resources of interest and talent professionally. This would require acquisition and application of knowledge, skills and attitudes that foster creative behaviour in children. Thus creativity is used as a central force to improve learning and teaching. Since teaching and learning are both important and are intertwined, creative teachers' performance tends to stimulate creative learning with the result that both teacher and students expand potentialities for creativity. Teacher trainees with general understanding of creative behaviour and creative teaching skills would provide opportunities for every child to learn grow and live creatively.
Eugene (1961) explored that creativity which is measured by creativity tests is independent of intelligence, but the creativity which is being evaluated by the teachers is related to the intelligence. From this it is clear that the teachers visualize creativity in terms of intelligence. So far, the studies, which have been conducted on creativity and cognitive abilities shows that we should not expect that the children with low I.Q or average I.Q will be as much creative as those with high I.Q. These may be wide variations between the creativity of the children who possess the similar I.Q. levels.

Thus, in this technological period creativity, intelligence and teaching competency are considered as human potential resources for the development of the teacher trainees. Intellectually speaking creativity is regarded as the highest cognitive ability, which should be developed in every teacher trainee. Hence, training needs to be given to inculcate self-actualization and teaching competency. This study is confined to study the teacher trainees' beliefs, views and orientations with regard to importance of creativity, intelligence and teaching competence.

1.8 Resume of the Succeeding Chapters

Chapter – II - presents the review of related literature.

Chapter – III - deals with the present study i.e. statement of the problem, objectives of the study, hypotheses, variables studied and scope and limitations of the study.

Chapter – IV - deals with methods employed in the investigation for data collection and the statistical techniques used in the analyses of the data.

Chapter – V - deals with the results and discussion.

Chapter – VI - deals with the summary, major findings, conclusions educational implications, recommendations and suggestions for further research.
CHAPTER - II

REVIEW OF RELATED LITERATURE