CHAPTER I

BACKGROUND OF THE STUDY
### BACKGROUND OF THE STUDY

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LOCATION OF THE PRESENT STUDY
NAGALAND
BACKGROUND OF THE STUDY

1.0.0. The Present Study

The present study entitled "A Study of Vocational Preferences of High Creative and Low Creative High School Tribal Pupils in Kohima and Mokokchung Districts, Nagaland", is an attempt to unfold a new horizon of understanding among the 'significant others' of Naga teenagers about their right vocational preferences through the development of their creative thinking power.

The present research report is divided into five chapters. In the first chapter, the theoretical background of the study has been discussed. In the second chapter, review of relevant studies on Creative Thinking and Vocational Preferences has been done. In the third chapter, selection and construction of tools used, statistical techniques employed, selection of sample and procedure followed in data collection have been described. In the fourth chapter, analysis of data and interpretation of the findings have been discussed. In the fifth chapter, conclusions, implications and suggestions of the study have been presented.

The following chapter speaks about the theoretical background of the study by making an effort to define some of the basic concepts under the captions: The Naga Culture, Creative Thinking and Vocational Preferences.
1.1.0. The Naga Culture

Nagaland, bounded by Burma on the East, Assam on the West, Arunachal Pradesh on the North and Manipur on the South, is the homeland of the culturally rich, festive loving, warlike and kind-hearted group of people called the 'Nagas'. This eastern frontier state of India, became a separate territory in 1963 and a full-fledged state in 1972. Prior to this, it was one of the districts of Assam. The state lies between 25°6' and 27°4' north latitudes and between 93°20' and 95°15' east longitudes.

There are nine districts in the state. Kohima and Mokokchung are the two most developed among them. The bulk of the population is constituted by tribals. Nearly ninety (90%) per cent of the population is rural. Fourteen major tribes dominate the land with the assistance of other sub-tribes in an exemplary style often reflecting the country's lofty ideal of living 'unity in diversity'. The major tribes are, Angami, Ao, Sema, Lotha, Chakhesang, Rengma, Sangtam, Yimchunger, Chang, Konyak, Khamangan, Phom, Zeliang and Kuki. Each tribe has its own dialect. In towns they usually communicate each other through Nagamese: a dialect based on Assamese and Hindi. A number of tribes living together in a composite area normally speak each other's tongue. However, English is regarded as the official language and
PERCENTAGE OF POPULATION
(TOTAL, AO AND ANGAMI)

- Total 76.45%
- Ao 13.43%
- Angami 10.12%

Fig. 1.1.
medium of instruction from middle school onward in the State.

Agriculture, both terrace and shifting cultivation is the primary basis of agrarian economy of the Naga people. About 72 per cent of the total sown area of the state is under jhum or shifting cultivation. About 79 per cent of the total working force is engaged in agricultural activities. Nowadays, a change that can be seen is that the jhuming cycle has been reduced to 6-8 years instead of 12-15 years as was in practice for the last 50 years.

There are more than a thousand villages in Nagaland. The real political unit of a tribe is the village. Each village has one or more gaonburas depending upon the size and number of Khels (lanes) in the village. Gaonburas (G.B.), treated as representatives of the government, are responsible for day-to-day administration of the villages.

According to 1981 Census, Nagaland has a population of 7,74,930. The two districts - Mokokchung and Kohima has 1,04,193 and 2,50,105 persons respectively. But, in tribal population alone Ao's are more (1,04,118) than the Angami's (78,342). The literacy percentage of Nagaland according to 1981 census is 41.99%. And for Mokokchung and Kohima are 61.78% and 48.94% respectively.
About the origin of the word 'Naga', it is still uncertain - when, how and by whom, the word was first used by meaning 'what about the people'. There are differences of opinions among the elders and scholars about the origin of the word. However, so far, some attempts have been made by scholars from among themselves as well as from outside to define the origin of the word 'Naga'. Among the many theories of origin the most convincing is, the one having a Burmese connection (Shimray, 1988). According to this theory, the Nagas have migrated from Burma to the present hill state. This is supported also by historical facts. The Nagas, men and women, had the tradition of making 'holes in the ears' for their ear decorations. The Burmese called the group of people with holes in the ears as 'Naka'. The Anglicised word for 'Naka' became 'Naga'. The reason for it is that the Britishers first came into contact with the Burmese since 1795 and with the Nagas in 1832. It is, therefore, obvious that the British explorers were informed about the Naka group of people by the Burmese whose movement from Burma to the present hill state they alone knew. Thus it is sensible and practical to believe that the word 'Naga' originated from the Burmese word 'Naka'. From this time on, the Anglicised word 'Naga' came into being in all the historical records left by writers of different times.
The salient points of Naga culture are described in the following sub-sections.

1.1.1. Head-Hunting

In fact, the practice of head-hunting which existed at different times in various regions of the world, usually originated in the superstition that the human head contains the 'Soul-Force'. This was believed to govern the rise and fall of a community and thought to be transferable. The slain man had to belong to a different village if his 'soul-force' was to benefit his killer. An increase in population, cattle or pigs, better crops and other material improvements were believed to demand as accretion of 'soul-force'. When the 'soul-force' diminished, the tribes were prompted to embark on head-hunting expeditions to replenish this intangible asset.

Head-hunting was a part of everyday life of the Nagas, and to a great extent conditioned-life in the villages. Successful head-hunters enjoyed the privilege of wearing special dresses and ornaments. They were distinctively tattooed, and accorded with coveted social status. Even in matrimonial matters, successful head-hunters enjoyed an advantage over others. Thus, head-hunting often became a remedy even for young men fired by ambition to flaunt special dress and ornaments or to marry a particular maiden. However, inter-villages
and inter-tribal clashes were the main cause as well as effect of head-hunting in those turbulent days. But, this tradition has been subsided for all time in modern Nagaland.

War among the Nagas, as among the civilized nations, is by no means necessarily prefaced by a formal declaration, and more often than not would start by raid or ambush on the part of one of the two villages. However, formal battle, is also another form of war among the Nagas.

1.1.2. Religion

The Nagas by and large are animists. Amongst the Nagas there appears to have a perception that there must be some universal 'cause' to whom all things are indebted for their being. They appear also to acknowledge a 'Divine Power' to be the 'Maker' of the world, and the 'Disposes of all events: They denominate Him the "Great Spirit". Then comes a number of evil spirits, who are ill disposed towards human beings, and to whose malevolent interferences are ascribed to all woes which afflict mankind. To them, therefore, sacrifices must be offered. These malevolent spirits are Sylvan deities, spirits of the trees, the rocks and the streams, and sometimes also of the tribal ancestors.

However, since the embracement of Christianity things have been changed, and animism has been pushed to the back-
ground almost to the extent of disappearance. Now, the state claims that 90% of its people are Christians.

1.1.3. Morung

Morung, the fortress or guard-house or the dormitory of unmarried men, is the real training centre for village youth in those days. Every boy after attaining puberty used to enter the life of morung where they learned various aspects of life in the society. Morung is usually an oval-shaped house which contains cubicles and fire-places where young men pass the night listening to old stories and adventures or learning the art of warfares. The porch of the morung is sometimes opened and sometimes fenced. The main post of the porch has got figurines with striking representatives of tigers, elephants, human figures, lizards, crocodiles, birds etc. Around the walls they used to hang the skulls of the hunted men and trophies of war and skulls of animals as well. But, nowadays, morung has fallen into disuse as a result of Christianity, modern education and civilization in the state.

1.1.4. Education

Since the inception of formal education in Ao areas, the flow of education though not very fast but ceaselessly moving on till today. Much of the credit goes to the American Baptist Missionaries for their relentless works for the
cause of education of the Nagas and, thus enable them to come out of the dark world of ignorance. Education the people along with preaching the gospel, was the method missionaries have wisely opted and, the outcome was wonderful.

Today, perhaps the most spectacular achievement in Nagaland has been in the field of education. At present, the state has 1150 government primary schools, 226 middle schools, 70 high schools, 3 Junior Teacher Training Institutes (JTTIs), 6 colleges (govt.), 1 college of education, 1 agriculture college, and a number of private educational institutions including two polytechnics where training is given on certain trades to the trainees including drop-outs. Quite a good number of local craft centres like handloom or knitting and embroidery for women have been opened through government initiative in different parts of the state. Besides, there is one University Campus of NEHU at Kohima where instructions are given on five academic disciplines. Works on construction of a central university complex at Lumami (Zunheboto District) is in progress.

In order to provide academic guidance to primary and middle schools, 2 school complexes have been established. Emphasis has also been given to promoting science and technology in classrooms. Computer literacy programme has been introduced in eight high schools, and it will be extended
to the rest in phased manner. Adult literacy is receiving special attention with about 86,000 adults having benefitted from it since 1977.

In consonance with the 'New Educational Policy' vocational courses have been introduced at the plus two (+2) stage during 1988-89 and, 106 handicapped children have been covered in schools under UNICEF Project.

Now, the literacy rate in the state has been increased from 17.91% in 1961 to 27.40% in 1971 and to 41.99% in 1981. It is expected that the literacy percentage of the state may touch the mark of 50% at the end of 1991 census.

1.1.2. The Angamis

Kohima, the 'Switzerland of the East' and the homeland of the Angami tribe, is the capital town, and one of the seven districts of the state of Nagaland. Kohima commands a majestic landscape. Right in the heart of the town there is the historic war cemetery (World War II) which attracts thousands of tourists every year.

One of the Angami traditions says that they came from Burma and belonged to the Karen group of Burma. They however, split into two groups and, the Angamis turned westward and settled in Nagaland while the Karen turned eastward and settled in Burma. The place of their split is not clearly
known but it is assumed that, it might be possibly at Khezakhenoma. In another tradition, it is said that the tribe has emerged from the bowels of the earth, of course not in their own land, but in some other land to the south of their present habitation. In fact, the name 'Angami' is a corruption of the name 'Gnamei', given to them by the Manipuri kacha Nagas. Earlier people belonged to Angamis group were known by themselves as Tenymia. The name came from two words 'teny' which means 'fore-father' and 'mia', means 'people'. Under the Tenymia group includes Angami, Rengma, Chakhesang, Mao and Zeliang. In another version, it is said that 'Tenymia' applies to those who use 'Kilt' as their cloth and a particular haircut.

Thus, it may be concluded that Angamis came from Burma and halted at Khezakhenoma, from there they moved north westward of Kohima and settled there. From Kohima they dispersed to north, east and west, and of course, south was already occupied by them on their march to Kohima. Since they want to settle there and don't want to go further, Semas called them 'Tsungomi' which means, "who do not want to go further."

1.1.3. The Aos

Aos, one of the Naga tribes, is often described as possessing several peculiar characteristics not found in
any of the other tribes. For instance, Ao custom of disposing of their dead by laying them out on Platforms; their elaborately organised village councils; their claim to have emerged from Longterok near Chongliyimti on the right bank of the Dikhu river; their huge xylophone laboriously hewn out from single logs; their tattooed women folk; their division into language groups so stable that a husband and his wife will at times converse together each in his or her own language; and complicated clan and phratry rights, all distinguish them sharply from their Sema and Lotha neighbours or even from the Angamis.

The name 'Ao' is a current mispronunciation of 'Aor', their own word, meaning "those who came" (i.e. came across the Dikhu river) as distinct from 'Mirir' (those who did not come), the term used for Sangtams, Changs, Phoms and Konyaks. Ao tradition states quite definitely that the ancestors of the tribe came out of the earth at Longterok (six stone), lying on the top of a spur on the right bank of the Dikhu river just about opposite Mokongtsu. The stones are just above the present Sangtam village Chongliyimti.

1.1.4. Cultural Differences Between Aos and Angamis

In fact, similarities are much more than the dissimilarities between the two tribes. Of course, this is also the reason why they became a part of the whole Naga group.
However, some of the differences that could be seen distinctively are specially in dress and ornament, war and weapon, disputes and settlements, marriage and divorce, and appearance and nature. They are briefly discussed below.

1.1.4.1. Dress and Ornaments

Ao menfolk used to war only loin-cloth and nothing else, and womenfolk wear a short mekhla which hardly come up to knee and nothing for the upper part except the many stringed necklace to partly cover the shapely breast. Angami menfolk's usual dress is a kilt and a wrapper while for womenfolk a mekhla, coarse shawl and apron. Aos and Angamis shalws are different in colour and designs which carry different meanings. In the same way, meklha which is one of the important dresses for womenfolk are of different sizes colour and embroidery works.

Among the many ornaments used by the Aos, the long turf of hair won in the lob of a woman's ear which is the hair from a hunted-head, is hardly seen among the Angamis. Decorations of Ao head-gears and beads of various shape and sizes are different from that of their Angami counterparts. Again, marine-ornaments like sea-shells, conch etc., which are common among the Angamis are not common among the Aos. Another interesting difference found between the two tribes is, an Ao woman invariably except when she bathes,
wears at least one string of beads, night and day. It is only from a corpse that all beads are removed and it is unlucky for a living to imitate the dead in any way. But such tradition, only exacting to the women, is not found among the Angamis.

1.1.4.2. War and Weapon

Most of the weapons used by both the tribes are similar excepting - in shape and size. For example, Ao spears have different shapes and sizes from the Angamis. The same is true in the case of shields or daos. However, it is clear that use of muskets (guns) was not popular among the Aos, in the same way, bows and arrows among the Angamis.

Most of the types of warfares are same except treachery which is practised by the Aos, and poisoning of wells or water streams by the Angamis.

1.1.4.3. Disputes and Settlements

Disputes among the clans or in the same village over theft, rape, encroachment, homicide etc. are settled through different methods adopted by the two tribes. According to Ao customary law little boys till they enter 'morung' and little girls till they first tattooed are children and regarded as incapable of committing crimes, so no fine can be imposed upon the parents for anything they may do. In case
of homicide whether deliberate or accident, the relatives of the dead man are allowed (partly to content themselves) to wreck the murderer's house, loot all his property or even driving him out of the village but not permitted to kill the murderer. Settlement for theft usually done by restoring the property stolen to the victim and giving a pig to the elders by the thief. Taking oaths is also another form of settlement among the Aos. However, incendiaries are often hanged to dead.

Among the Angamis, theft case is always settled by exacting from the thief seven times the value of the property stolen, the fine being paid to the victim whose property is also returned to him if recovered. In case of homicide often the culprit is banished from the village for a period of seven years and confiscation of all his land as well. But, in certain serious cases of homicide the culprit is banished with his whole kindred not only for seven years but for the whole generation. However, serious type of disputes over anything of the sort between hostile villages often became the shortest step to definite war.

1.1.4.4. Marriage and Divorce

In old days' marriage system, an Ao groom had to serve in his would-be-bride's family for a period of six months or one year as formality. But among the Angamis,
after the two parties have agreed, omen watching from a strangled fowl and interpretation of dreams of the boy and girl of that particular night is done. Only when the interpretations come out in favour of their wish, then only marriage price is discussed and the day for the marriage is decided.

Divorce was rather a common phenomenon in Ao married life. It was exceptional to find a middle-aged Ao man or woman who has kept the same partner throughout. There is no ceremony connected with divorce. The couple simply separate. But the property had to be divided up. Usually the woman gets a tenth and the man the rest. Children (if they happen to have) often continue to live with the mother if she wishes so. However, for any kind of sickness with any of the children, expenses for treatments are shared equally by both the parents even though they are already divorced.

But among the Angamis, incompatibility is the chief reason for most of the divorce. When a man wishes to take a second wife without having divorced the first wife, he must first obtain the latter's permission. A widow can marry but she must obtain permission from her late husband's heirs before doing so, else she loses her property brought as dowry. Angami customary law permits a widow marrying her husband's younger brother if they wish, but not with the elder brother.
1.1.4.5. Appearance and Nature

Sharp features, fair complexion, brown narrow eyes, airy hair, thin lips, Aryan type nose, clean face (mustache and beard seldom grow), often wearing a smile exacting to the purely of Mongolian type, is the appearance of Aos in general.

As far their nature goes, they are social, open-minded clever, sensitive, hospitable, adaptive and receptive. In fact, it is because of such qualities that the Aos could have taken up the sound decision of welcoming modern education in their land when the Christian Missionaries first came to the Naga Hills, while the rest are still reluctant to accept.

While the features of the Angamis are mobile, pleasant and often decidedly handsome while the voice is on the whole musical. Flattened nose and slightly oblique eyes of a decidedly Mongolian type may be seen side by side with straightness of eyes and nose that might be purely of Aryan. The colour of eyes is always brown and the hair black and wavy is rarely curled. The skin colour is from reddish to very fair. As regards their persons go, Angamis are neat and clean, washed frequently even in cold weather - a quality only too rare amongst hill folks.
By nature they are free and frank among themselves but not with others. Hutton (1991) describes, "Angamis as the proudest and most conservative of all the Naga tribes." Angamis are intelligent, honest, hospitable, humorous, independent, of course, often melancholic and reserved. It is said that when formal education was brought to Angami land by the Missionaries, Angamis were not very willing to receive it, and that may be one of the reasons why number of educated is less till today among the Angamis than the Aos. However, the least can be said about the Angamis is that they have mental outlooks and mental processes far more consonant with those of the average Europeans than it is with their Ao counterparts.

A special mention can be made here that education, embracement of a new faith (Christianity) and civilization have brought so much change in the life and behaviour of the modern Nagas and they hardly would like to remember tradition like head-hunting or they were once fully naked. Such things merely became a part of their history. Today, Nagas are like any other civilized group of people in the world in many respects like education, social, political, economic, moral, cultural etc. Their attitude has been changed from head-taking to soul-saving. Ambitious Naga youths often aspire for creative occupations where they cannot
only earn but also find the expression of their talents. Partly, in response to this, different types of vocations in government as well as private sectors have been introduced during the last few years. Now the government is also trying to introduce certain vocations including music in the colleges (P.U. level) under the guidelines of NEHU, along with academic subjects.

Most of the vocations included in the list of vocations supplied to the pupils (at the time of data collection) to indicate their vocational preferences are the vocations available in Nagaland. Besides, all the items and statements used for verbal and non-verbal test of creative thinking are derived from different cultural items and traditional ways of the Nagas of the Past and Present.

1.2.0. Creative Thinking

Man has been endowed with the unique and uncommon powers. Among all the powers that man possessed 'creative thinking' is the supreme and the most unique. Even the computer which can work with amazing feat cannot match, as it can only repeat the mechanical orientations, not the production of original ideas which the human mind only is capable of doing - the work of creation. In other words, the computer which the world marvells at is one of the products of human imagination.
The thinking mind is man's exclusive gift. Since time immemorial, thinking has been a weapon in man's armoury for defence and attack in the struggle for survival. Thinking has developed as an instrument for controlling and mastering a difficult environment. That is why, it is described as one of the most remarkable of human achievements.

Our thinking mind is of twofold: (i) a judicial mind which analyses, compares and chooses, and (ii) a creative mind which visualise, foresees and generates ideas. These two minds at best work together, judgement keeps imagination on the track. Imagination not only opens ways to action but also can enlighten judgement (Osborn, 1953).

1.2.1. Concept of Creative Thinking

Researches have shown that there were two distinct modes of thinking, one referred to as 'convergent thinking' (intelligence) and the other as 'divergent thinking' (creative thinking). Divergent thinking calls into play the abilities of 'fluency', the ability to think up as many solutions as possible, 'flexibility', the ability to think up different or categories of approaches or ideas, 'originality', the ability to think up unusual solutions, and 'elaboration', the ability to think up complete details of an item. This is the type of thinking which makes the strange familiar and the familiar strange (Gordon, 1961) or going beyond
the information given (Bruner, 1951). Guilford (1950) is of the view that creative thinking involves mainly the use of divergent production abilities which enable a person to think in different directions and find out new solutions to problems. According to Getzels and Jackson (1962), divergent thinking tends to be stimulus free whereas convergent thinking is stimulus bound.

Creativity as it is found in the Webster's Oxford Dictionary, has its 'root' in the Indo-European word base, 'Kere' which means 'to grow' or 'to cause to grow'. And in English verb - 'to create' or 'to cause to come into being' with the accompanied adjective, referring, meaning of creative, to 'ability' or 'power'. In fact, it is a word of power, prestige and prodigiousness that we all wish to appropriate. Creativeness confers power and distinction (Lytton, 1971). Thus, the term 'creativity' is more or less defined as the 'quality of being creative' or 'ability to create something entirely new'.

Flanagan and colleagues (1962), remind us that, to a great extent, the definitions of creative thinking are determined by the need of a culture. For instance, the definitions of talent in primitive tribes may be very simple: tribes whose survival depends on hunting wild game will define creativeness as the ability to 'hunt', while those
who are continually at war will value the ability to 'fight'.
Further, even nations such as Greeks and Romans which produced brilliant men had a limited view of creativeness. The Greek valued the 'orator' and 'artist' but not the 'inventor', while the Romans prized the 'soldier' and 'administrator', but did not recognize many other talents. Thus, it seems to be very important to keep an eye on the cultural background of the society while defining creative thinking.

However, creative thinking as some say, is a seed in man's life which germinates on fertile mind, waters in silence, blooms at midnight and fruition in public. It is a friend of loneliness and a foe of noisiness. Insanity, frustration, abnormality, neurosis, psychosis, all find their positive side in creativity. It grows from spark to flame and from flame to bone-fire in life.

Another view says, creative thinking comes within the range of our grasp only when we cause to strive for a time, when we let our desire cool, and retire the flesh. It is a sort of voice which though still and small in the rush of ordinary activity, grows more insistent in the silence.

A genuinely creative thinker is both critical of unsound views and yet adventurous in extending and developing new ideas. He is receptive towards what others have thought,
although unwilling to accept it as final. He shifts out the sound parts from the unsound and attempts to develop and experiment with what satisfies the critic in him as worthy of attention. Still it is further described as intuition, insight, imagination and the divine power in man (Thompson, 1959). It may be stated that in spite of the efforts made by scholars and even laymen to define creative thinking almost half a century ago (conscious effort), till today none of the definitions seem to be universally applicable. In other words, the definitions were, more or less confined to their own time, place and people.

However, defining creativity continues here, from its 'process aspect' as it is directly relevant to the study. Rhodes (1961), from a thorough analysis of fifty definitions of creativity has given us four strands (Ps) of creativity: Person, Process, Press and Product. Various theoreticians or systematic investigators in the field of creativity have used either one or a combination of these four strands of creativity, and the definition of creativity that one has given, hovers around that aspect.

It was Spearman (1930) who thought of creation as purely a process. For him, creative thinking is the process of seeing or creating relationships with both conscious or subconscious processes operating. Hebb (1949) expressed
creative thinking as a function of relative strength of conscious and unconscious processes, while Vinacke (1952) identified the same with an integrated harmony between external world of reality and individual's internalized needs. DeHaan and Havighurst (1961) reported the efforts of Wilson who tried to bring to focus the diversity in the meaning of creativity process as below:

1) The outflow of individual or group through which a product is structured.

2) An action of the mind that produces a new idea or insight.

3) The mental process of manipulating the environment which results in the production of new ideas, patterns or relationships.

4) The mental process that involves the rearrangement of past experience, with possibly some distortion, into new patterns to better satisfy some expressed or implied need.

5) The process which results in a novel work that is accepted as a tenable or useful or satisfying a group at some point in time.

6) The creative process is any process by which something new is produced - an idea or an object including a new form or arrangement of old elements.
The new creation must contribute to the solution of some problem.

Foshay (1962) considers the product as a part of the creative process. He postulates four major aspects of this process. Openness to one's own experiencing, focussing of one's experiencing, the discipline of one's actions to work out the focus and closure.

Lehois (1963) submitted, "Creativity may be viewed as a complex human attribute that is manifested as a cognitive empirical process from which an original product emerges (the process unfolds within all individuals but most intensively within those who possess a creative personality)."

The creativity exponents, like Guilford had also believed the 'process' when he defined divergent thinking as the process of hypothesis forming, testing and result communication. It is also clear from the definition of Torrance that he believed in the 'process'. Basing on Torrance definition, Yamamoto (1964) defined creativity as "the process of forming new ideas or hypotheses, testing these ideas or hypotheses, and communicating the results", Maslow (1967) believes that creative thinking and for that matter all learning and thinking involves pre-conscious rather than conscious processes.
Basic to these different descriptions of creative process are the classical steps suggested by Dewey (1910) and Wallas (1926). Wallas suggested the following four stages of creative thinking process:

1. **Preparation**: A good supply of information is necessary though it is not the sufficient thing for creative production. Therefore, collection of information i.e. preparation is suggested as the first stage of creative thinking process.

2. **Incubation**: When preparation is completed and conscious thinking is over without fruitful results, there is an interval between this point and the time of arrival of the creative idea, i.e. illumination. It is called 'incubation'. Incubation is a peculiar stage in creative thinking process in which apparently there is no activity on the part of the individual, but during which or at the end of which there often comes a flash of illumination, a solution to a problem or a strikingly new idea. But during this passivity, a persistent and strong urge to create is always there, consciously or unconsciously.

3. **Illumination**: Wallas stage of illumination in creative thinking is a much talked of event. Many creative thinkers believe it to be a source of their bright ideas. Illumination flashes suddenly and therefore it is also known as "the
period of luminous surprise", "intellectual rhythm" and "sub-conscious at work". Illumination coupled with luck is quite widely known as 'inspiration' which implies some supernatural influence. This notion has rendered a somewhat mystic touch to creativity. In fact, illumination is a state when an individual takes a sudden large leap in his thinking. Westcott (1961) calls it the 'intuitive leap'. This memory of inspiration is often associated with 'Eureka Feeling' (Rogers, 1959). There is unanimous agreement that during intuition, there is an abundance of controlled thinking, a resort to free association in a kind of day-dreaming state, and at the end, comes a flash of genius (Beveridge, 1950).

4. **Verification:** Wallas last stage of verification involves both elaboration and evaluation. Evaluation in creative thinking is an unavoidable step if any of the creative product ultimately is to be of any use to a community. It is a part of the creative process. As Guilford (1950) asserts that evaluation is always there right from the beginning throughout the creative thinking process.

When one thinks of creativity from 'process aspect' one can said to a great extent the problems associated with cultural differences inherent in the use of the term. It also helps to think in terms of the abilities involved in the successful operation of the process or for the production
of creative products. Qualities of the product will result
from the process itself. Personality variables or environ-
mental conditions that facilitate or hinder the creative
functioning can also be described by the process definition.
This is why Torrance prefers the process oriented definition
of creativity. This is also why the present investigator
selected his definition as operational definition of creati-
vity, which he (Torrance) defines as "a Process of being
sensitive to problems, deficiencies, gaps in knowledge,
missing elements, disharmonies and so on; identifying the
difficulties, searching for solutions, making guesses or
formulating hypotheses about the deficiencies; testing and
retesting them and finally communicating the results."

This definition includes all the steps of the creative
thinking process suggested by Dewey (1910), Wallas (1926)
and Rossman (1931), and characterises creativity as a natural
human process motivated by strong human needs (Deshmukh,
1984).

1.2.2. Components of Creative Thinking

In fact, creativity is a complex blend of a number
of abilities or components. Some of the basic components
of creativity are as follows:

(a) **Sensitivity to Problems:** Many a time we are surrounded
by problems though we are not quite aware of them. But a
creative person senses the presence of a problem instantaneously and girds up his loins to find a satisfactory and acceptable solution to the problem. This component indicates the receptivity for problems when the creator sees defects, needs, deficiencies, oddities, unusualities and sees what must be done. Whether the problem is simple or complex, he attacks it from various angles.

(b) **Fluency:** It refers to a rapid flow of ideas and tendencies to change direction and modify information. On a particular topic or a problem, a creative person can express his ideas very fluently. The relevant ideas given by him are counted to ascertain the level of his creative thinking ability. This component is the quantitative representation of the units of products.

(b) **Flexibility:** A creative person's thinking is characterized by flexibility rather than rigidity. It is the readiness to change the behaviour to meet the changing circumstances. The ideas expressed by a creative person on a particular topic are not of the same type, that is, they do not belong to one and the same category. Therefore, flexibility represents number of classes of objects or trains of ideas produced. It indicates, in how many different ways the individual can respond to a stimulus. To evaluate this ability, the ideas expressed by an individual may be categorised and the number of the categories may be counted.
(d) **Originality**: It refers to the unusual ideas and suggestions or unusual appreciation of particular objects. This is the most important component of creativity. While expressing his ideas on a certain topic or devising solution for everyday problems, a creative person will put forward such ideas as are original or they are indirectly based on ideas previously read or heard. To determine this ability, original ideas out of total ideas expressed by an individual should be counted. Statistical in frequency is the criterion to determine originality of a response as it represents the newness or uncommonness in the product.

(e) **Elaboration**: It refers to the expanding and combining of activities of higher thought. It shows production of detailed steps, variety of implications and consequences which can be qualitatively measured.

(f) **Curiosity**: Curiosity is another important component of creativity. The creative person is always anxious to understand each and everything of his universe. He remains restless until he is able to understand what he has heard or read. Such individual with limitless curiosity succeed in making discoveries and creating new things.

(g) **Imagination**: Imagination occupies a very important place in the creativity component. A number of abilities
included in creativity are based on imagination. Only a person with good imaginative mind can express a greater number of ideas fluently, flexibly and originally.

(h) Redefinition: Redefinition is closely related to flexibility that arise from transformation, specially of convergent productions. It is the ability to rearrange ideas, concepts, people and things to shift the function of objects and use them in new ways.

However, it should be noted that an appropriate sphere is an essential requirement for creative functioning of any of these components. It is true that we cannot expect good crop from a good seed unless suitable soil and proper care is given. Likewise, creative thinking of a person cannot flourish in the absence of an appropriate sphere either in the society or school or at home.

1.2.3. Structure of Intellect Model

The single most important influence on definition of creativity was the research of Guilford (1959, 1967). Thus, the end of 1950s had brought a new era of research in the area of human ability by the appearance of Guilford's 'Structure of Intellect Model'. Guilford has identified as many as 150 separate abilities. Through this research Guilford called attention to the fact that most of the widely
accepted measures of intelligence assessed not more than half of these abilities. His research has emphasized the fact that there was no way that a single IQ score could be an accurate index of an individual's intelligence because there were in fact, a number of 'Intelligences'. He defined intellect as a "System of thinking and memory factors, functions and processes" (Guilford, 1959).

Guilford, thus, not only able to separate creativity from intelligence, but also discovers two types of thinking which he calls, convergent thinking - which is of intelligence and, divergent thinking - which is of creativity. This new discovery forms a stepping stone to the subsequent researches in the area of creativity by changing the emphasis from intelligence to creativity.

In Guilford's model, intelligence is perceived as having three dimensions, contents, processes and products. He said that every human ability has these three dimensions, and every ability is related but distinct. According to him, the best model that can be constructed to explain the structure (model) and relationships among these abilities is a 'morphological one', a three dimensional cube. Within the content dimension - there are four types: figural, symbolic, semantic and behavioural. Operations (processes) include: cognition, memory, divergent thinking, convergent thinking.
and evaluation. Products can be of six types: units, classes, relations, systems, transformations and implications.

Each human ability is an intersection of these three dimensions, and can be identified by tests chosen or constructed by Guilford and his associates. For example, an item included in some intelligence tests requires an individual to put a series of pictures into correct order. This item tests convergent product (an operation of semantic (a content) system (a product)). Thus, Guilford's theory of structure of intellect has great educational implications for relating content, process and product into a unified problem solving approach to teaching learning process. A diagram of the model is given in Fig. 1.2.

A brief description of the three dimensions along with their sub-types, is given here.

1. Contents: The Kind of Information Received

   i) **Figural** - Refers to concrete in form, often involving visual and facial objects.

   ii) **Symbolic** - Denotes signs - such as letters, code numbers, when meaning and forms are considered important.

   iii) **Semantic** - The meaning to which words, pictures or notations have become attached.
Guilford's model of the structure of the intellect

Fig. 1.2
iv) Behavioural - The social aspects of intelligence, information essentially non-verbal regarding behaviour of ourselves and others.

2. Operation: How the Information is Processed (Process)
   i) Cognition - Simple recognition, comprehension or understanding.
   ii) Memory - Retention or storage of information in some form.
   iii) Convergent thinking - Output of a single answer in terms of conventionally accepted expectations.
   iv) Divergent thinking - Output of many and qualitatively different answers from some source of information.
   v) Evaluation - Making judgements or decisions in terms of criteria considered correct, suitable, desirable or adequate.

3. Products: The Outcomes or Results
   i) Units - Segregated items of information having such unique characteristics as digits, letters, dots or words.
   ii) Classes - A set of units involving a conception associated with the common elements such as words with similar meaning or with plural endings.
   iii) Relations - An association between units or classes as in words or figures analogies.
iv) **Systems** - An organisation or structuring of items, classes or relationships often involving discovery of rule required as in a letter or number series.

v) **Transformations** - Change, permulation or redefinition of existing information or its use in the case of new interpretation of stories or poems.

vi) **Implications** - Formation of extrapolation as in making inferences or predictions or in suggesting antecedents of observed events or in anticipating consequences.

Thus, each process in the model (e.g. cognition) will act upon each content (e.g. semantic) to produce each type of product (e.g. units). Each quality drawn through the model will represent the three characteristics of these facts.

It may be concluded that Guilford's Theory and research have provided the stimulus for landmark studies on creativity by Getzels and Jackson (1962), Wallach and Kogan (1965) and decades of research by Torrance (1966, 1974, 1981). Because of the work of these individuals and the social climate of the time, creativity began to be included as one of the most recognised talents for research, assuming almost equal importance with traditional conception of 'giftedness'. The researches of these individuals have pre-
sented convincing evidence that the abilities included under
the domain of creativity were just as important or perhaps
more important to academic or career success than those
abilities classified under the label of intelligence.

1.2.4. Creative Thinking and Intelligence

Most of the early psychologists considered creativity
either akin to intelligence or included it in the domain
of intelligence though it, actually is very different from
intelligence. Thurstone (1938) clearly pointed out the draw­
back of intelligence tests and tried to give measures for
creativity, but it was till Guilford’s protest at the Con­
ference of American Psychological Association in 1950, not
to equate creativity with intelligence, and since then,
the issue got an impetus. As a consequence, Thurstone (1951),
emphasised the distinction between the two and provided
a provocative analysis of the possible role of ideational
fluency, inductive reasoning and certain other tendencies
in creative behaviour.

But it was from the pioneering work of Guilford and
his associates (1956, 1957) that has brought to the fore
the existence of two distinct types of thinking abilities
of the intellectual domain which they called as convergent
production and divergent production. The former involves
the production of facts from the already known information,
ificant way from those who could be designated as highly intelligent.

Hudson (1966, 1968) has pointed out that divergent thinkers tend to be interested in literature and arts and specialize in them, while convergent thinkers turn to science.

Again, Getzels and Jackson (1962) in their landmark study on top 20 per cent high creative and top 20 per cent high IQ students in relation to their personality traits and achievement have found significant difference in personality characteristics of the two groups. But, difference in achievement was not significant.

However, in the end, it is still apt to think of these two abilities as two different styles of thought (Guildford, 1950), as two complementary aspects of human intellectual ability broadly conceived (Wallach and Wing, 1968).

1.2.5. Development of Creative Thinking in Pupils

In any system of education, what is necessary today, is to bring about the optimum development of the whole individual. To realise this end, the teaching which encourages children to acquire generalised learning strategies will be a prerequisite. It is obligatory on the part of the school to equip the child with generalised intellectual and other skills which will enable him to cope effectively with what-
ever state of the world he will encounter later in life. The major of these generalised skills or strategies is the creative thinking or creative learning.

The greatest joy of the teacher and the greatest hope for better world lies in the cultivation of creative power in children. Lowenfield and Brittain (1966) rightly remarked: "To teach toward creativity is to teach toward the future of the society". But the scene of the battle essentially is the classroom. It is a critical locus for a student's interpersonal and educational development while staying in school. Each classroom has its own distinct atmosphere and climate which may help or mitigate classroom interaction which in turn may impede the development of creative thinking in children.

Besides, creative thinking does not bloom in vacuum. It is just like a tender bud that resides in some measures within every child requiring only the gentle catalytic influence sensitive, imaginative teaching to coax into a glorious bloom. The creative mind interacts vigorously with a series of supporting and non-supporting factors whether at home or in the school. However, if we want to increase our creative manpower potential curiosity has to be fostered in children. Therefore, the crying need for every classroom today is the creation of suitable classroom climate and nourish the creative thinking of children.
Considerable attention has been given to description and measurement of creative ability during the last few decades, but little has been done regarding how school personnel can bring about expression and manifestation of creative endeavour on the part of the learner. One of the main reasons for the need of creating creative classroom climate and employing creative teaching in the classroom, is the fact that the genuinely creative pupils fail in life unless their talents are adequately tapped in schools.

Besides, a developing country like India needs men and women of high creative who can think up solutions to the varied problems baffling the country. The progress of any country in different areas of life such as, economic, political, social, cultural and even moral and spiritual, is mainly due to the efforts of a handful of its creative individuals. Toynbee (1964) has rightly said that "a few creative minds can make an enormous difference to civilization." He furthers said that "to give a fair chance to creativity is a matter of life and death of any society."

For proper cultivation of creative thinking in the classroom, the most crucial thing lies with the role of the teacher. The teacher is one of the most essential factors in the total educational system. In any way, he influences the personality of the students. In other words, students
copy his behaviour in the classroom and, they are satisfied only when his teaching can quench their thirst for knowledge and expression. Therefore, a teacher, in today's classroom, should be able to create conditions which enhance the creative thinking of his students, lest many of the students' problems may stem out of the kind of negative attitudes he has in the classroom which in turn may trouble the development of creative thinking in students.

In general, most of the school teachers prefer high I.Q. pupil to high creative one, as high creative pupil causes classroom problems to the teacher and school administration, as he is unpredictable. Hence, school teachers and administrators resent the creative, the bold and the unusual individual, because they prefer conformity to non-conformity. But what is expected from teachers is to stimulate creative thinking instead of stifling it, specially in this age where creative men and women are the called-upon people. Unfortunately, under the present set up of our education system neither the teachers want creative students in their classrooms nor the administrators want creative teachers in their institutions.

Like teachers, parents should also play a vital part in moulding and correcting imbalances in the personality of the child and also in promoting creative thinking.
in him. Perception of parents' attitudes and values by children makes a difference in the development and expression of their creative thinking. Torrance (1962) asked parents to help the child to understand his divergence, allowing him to communicate his ideas freely, enabling him to recognize and esteem his own creative talent. In the same way, society or authority in the institutions has also significant role to play in developing creative thinking in children.

A teaching is helpful in developing creative thinking when the teacher teaches in the ways that are favourable to the development of basic skills, understanding, work habits, desirable attitudes, valued judgement, adequate personal judgement etc, of pupils. In this kind of teaching special emphasis is laid on pupil's freedom of thinking in solving the problems in his own ways and the teacher acts as initiator, facilitator and helper whenever a pupil solves or fails to solve a problem. In such teaching, role learning and blind imitation are not encouraged as such tendency can make pupils become slaves to traditional techniques and practices of learning which are foreign to developing creative thinking.

Another important thing in creative teaching is, the teacher must emphasize 'openness' in all his teachings as openness may lead to divergent thinking of pupils. Such
teaching leads to generation of a number of new ideas, words, phrases, flexibility of thoughts and different directions of thinking in the pupils. Besides, the teacher must be acquainted with the technique of questioning and take full advantage of it. Questioning can be done about known subject matter and also about the unknown. This will afford stimulating environment to students to develop their questioning ability which is one of the forms of curiosity in action — the backbone of creative performance. For example, if a teacher perceives some novelty in students in classroom, instead of checking he should appreciate it.

Some important models or strategies of developing creative thinking have been developed by some of those who are tirelessly working in this field during the past few decades.

Torrance (1978) has identified five of the most useful of the available models that have been developed. They can be adapted to almost every subject matter content at any educational level to increase the chances of developing creative thinking in students. They are: (1) Creative problem solving model conceptualised by Osborn (1953) and refined by Parnes and his associates (1976, 1977); (2) A lateral Thinking Model of Debono (1970); (3) Psycho-dramatic Model (Moreno, 1946, Torrance 1976); (4) Before, During and After
Model of Torrance (Torrance 1970, Torrance and Myers, 1976); and (5) Cognitive-Affective Model of Frank Williams (1972).

Gary Davis (1969) has summarised seven general approaches to teaching creative thinking in the classroom as follows: (1) Providing creative atmosphere; (2) Stimulating thinking; (3) Encouraging Original Thinking; (4) Using discovery method of teaching and learning; (5) Changing curricula in the direction of more creative course work; (6) Teaching problem solving methods; and (7) Teaching systematic methods for generating new and combination of ideas.

These seven approaches are considered increasingly direct and helpful to the teacher to teach creative thinking and problem solving skills in pupils.

Other than these seven there are also some techniques which are often used in most of the attempts to teach creative thinking. They are morphological analysis, synectics, check-list, role plaing, programmed instruction, attributes listing etc.

It has also been through different researches that non-threatening and psychologically safe conditions in the classrooms are a prerequisite for developing creative thinking. Researches have also indicated that an individual will feel threatened if his self-image is questioned by others.
(Hyman and Sheatsley, 1947); if a new behaviour represents unfair elements (Mitchel & Mudd, 1957); if the desired change threatens the individual's status (Wilover, 1963); or if the individual feels insecure about prospect of change (Gallaghär, 1964). All these feelings of threat are rooted in the ambiguity and uncertainty in external sources which tend to increase the damaging anxiety which deflects an individual from constructive use of his talents.

In her exploratory study, Dye (1964) concluded that the history of civilization suggests the interdependence between creative thinking and democratic climate. A number of studies also seem to support this view and indicate that freedom and order properly proportioned, are necessary for emergence of creative thinking. A democratic climate in the classroom provides highly balanced combination of the two. It provies enough freedom to challenge the creative potential of a pupil and enough order to provide the means to actualise it.

Thus, the first main task of school (education) is to identify the creative talent of pupils from the early stage. The second important task is to nourish it by providing the right kind of needs through right approaches. The third or the last duty of school is to let the talent bloom to its perfection by creating a conducive climate in and
outside the classrooms. it is a universally accepted fact that creative thinking flourishes in the classroom.

1.2.6. Measurement of Creative Thinking

Even though the measurement of creativity is still a challenging task to the researchers, quite a good number of creativity tests have been developed during the last few decades. This has been done with the assumption that creativity and intelligence are two independent abilities and that the traditional intelligence tests are inadequate to measure the mental abilities in their totality. In spite of the complication involved in the measurement of creativity, efforts have been made to measure it by employing different types of media and methods of investigation depending upon specific situations.

McCarthy (1924) used 'Graphic Procedure' to measure creativity in children. Abramson (1927) measured creativity through Inkblot responses and observations. Grrippen (1933) measured creativity with the help of 'continuous contact method'. Stephenson (1949) measured creativity through 'Poetry Writing and Drawing tests'. These are some forms or methods of measuring creativity of children in the early days.
The systematic measurement of creativity started more or less from Guilford (1951) when he developed planned tests and used them for the purpose. Flanagan (1958) measured creativity through 'Problem-Solving Tests', Wallach and Kogan (1964), Getzels and Jackson (1959) and Torrance (1963) developed batteries of creative thinking tests of their own, are some of the most prominent and widely used tests of creativity up to date in the West, while, creativity tests developed by Parsi (1972), Kaul (1973), Majumdar (1973), Mehdi (1973), Chauhan and Tiwari (1974), Ramchandrachar (1975) and Kundley (1977) are some of the prominent ones in the country. However, most of these Indian tests of creativity are based on Guilford's as well as Torrance's creativity tests. Some of the tests are described here briefly.

1. Torrance Test of Creative Thinking (TTCT, 1966)

This test is one of the most prominent and widely used tests of measuring creativity. This is rather the only specially designed test through which creative thinking of children can be measured specifically. TTCT is available in parallel forms to test both verbal and non-verbal creative abilities. The thinking abilities that are sought to measure in both the verbal and figural tests in this test battery are:

1) Fluency - The number of ideas produced.
2) **Flexibility** - The number of shifts from one type of ideas to another.

3) **Originality** - Production of statistically infrequent or uncommon ideas.

4) **Elaboration** - Expansion of single ideas into details.

The pre- and post-test scripts were scored for all these abilities. The verbal tests were scored for fluency, flexibility and originality and non-verbal (figural) tests were scored for fluency, flexibility, originality and elaboration. All the seven sets of sub-scores were standardized and added together to derive total figural, total verbal and composite creativity scores. The composite creativity score is related to number, novelty and variety of responses of the students. The reliability and validity studies reported by the test constructor in the test manual indicate that the test battery is highly reliable and valid to measure the creative potential of individuals (Torrance, 1974). (For Guilford's test see S I Model, vide Caption 1.2.3.).

2. **Passi's Tests of Creativity (1979)**

   This is verbal, non-verbal, individual and group test of creativity. This test is published in both Hindi and English and mainly developed for the purpose of measuring creativity in school children. There are six tests altogether in this test battery. They are given in this section.
1) The Seeing Problems Test: This is a verbal individual-group administered test. It is designed to measure a factor of sensibility to problems, the ability to comprehend problems concerning the working of simple and handy articles of common use.

2) The Unusual Uses Test: This test includes the objects which could be used for numerous purposes but only those items which have proximity with the psychological and physical environment of the subjects.

3) The Consequences Test: This test measures the dimensions of fluency, flexibility and originality.

4) The Test of Inquisitiveness: This test expects from the subject to imagine and write as many questions as possible within six minutes. The questions should be mutually exclusive to one another in contents and meaning. The test provides non-verbal stimuli but the responses are to be accepted in writing in any of the language - Hindi, English or mother tongue.

5) The Square Puzzle Test: This test aims at measuring persistences with the help of a performance test in which a difficult situation is set up for the subject with the help of a puzzle. The square puzzle which consists of five identical right-angled triangles and five identical quadrilaterals made up of plastics.
6) The Block Test: The block test of creativity is a performance test which chiefly follows the pattern of Lownfield Mosic Test (1952) which was described by Ames and Frances (1962) as useful tool for providing greater opportunity to observe individual engaged in performing dynamic designs.

3. Baqer Mehdi's Tests of Creative Thinking

The battery consists of both verbal and non-verbal tests. The verbal test of creative thinking includes four sub-tests, namely, consequences test, unusual uses test, similarity test and product improvement test. Their brief description is given below:

1) Consequences Test: This test consists of three hypothetical situations for which the subject is required to think as many consequences of these situations as he can, and write them under each situation in the space provided for.

2) Unusual Uses Test: This test presents the subject with the names of three common objects and requires him to write as many novel, interesting and unusual uses of the objects as he may think of.

3) Similarities Test: This test presents the subject with three pairs of words apparently different and requires
him to think and write as many novel relationships as possible between the two objects of each pairs in the space provided.

4) Product Improvement Test: In this test the subject is asked to think of a simple toy of a horse and suggest additions of new things to it to make it more interesting for the children to plan.

The total time required for administering the test (verbal) is 48 minutes in addition to the time necessary for giving instruction, passing out test booklets to children and collecting them back.

The non-verbal test of creative thinking is intended to measure the individual's ability to deal with figural content in a creative manner. Three types of activities are used for this purpose, viz., picture construction, picture completion and triangles and ellipses. The total time required for administering the test is 35 minutes, in addition to the time necessary for giving instructions, passing out booklets and collecting them back. A brief description of these activities is given below:

1. Picture Construction

   This activity presents the subject with two simple geometrical figures and requires him to construct an elabo-
rate picture using each figure as an integral part. The subject is allowed to turn the page to use the figure in any way he likes for making the picture. Emphasis is put on originality and elaboration by requiring the subject to construct a novel and most elaborate picture.

2. Incomplete Figures

This activity consists of 10 line drawings which could be made into meaningful pictures of different objects. The subject is asked to make a picture which no one else in the group will be able to think of. He is also asked to give an interesting and suitable little to each picture he makes.

3. Triangles and Ellipses

In this activity the subject is provided with 7 triangles and 7 ellipses and he is required to construct different meaningful pictures based on the two given stimuli. He is also required to give a suitable title to each of the picture he makes.

In spite of the various tests of creative thinking so far developed by different researchers in both East and West, the present investigator felt the need of developing a creative thinking test battery of his own (by adopting Mehti's) in view of the different cultural setting, local
suitability and understanding level of high school tribal pupils in Nagaland. It is also a well-known fact that the culture concerned plays a significant part in the development of creative thinking of children. Hence, the battery of 'Nagaland Tests of Creative Thinking' (NTCT) used in the present study has been developed.

1.2.7. Need and Importance of Creative Thinking in Education

Just as the potentiality of a seed brings forth a tree, similarly creative potentiality of a man brings forth his universe. Just as an effect does not exist apart from its cause or a pot does not exist apart from the clay, similarly the age of science and technology does not exist apart from the creative potential.

The importance of creative thinking in education and the significance of creative talent in the well being of the whole mankind, has been rightly described by A.W. Griswold (Singh, 1981) in the following lines:

"The spark from the heaven falls,  
Who picks it up? The crowd?  
Never, the individual? Always.  
It is he and he alone as artist,  
scholar, scientist, inventor, explorer,  
spiritual leader, a statesman -  
Who stands nearest to the source of life and transmits its essence to his fellow men."

Perhaps, keeping in view the importance of creative thinking
in education, the report of Kothari Commission 1964-66 opens with the following lines:

"The destiny of India is now being shaped in her classrooms."

Truely, creative thinking is the unique gift of nature which is exceptional endowment to man alone. It is creative thinking which enables man to wear the crown of creation. Before him the biggest animal kneels down, the fierce animal runs for life. Come back to his own world there are Newtons, Einsteins who have changed the history of mankind, landed on the moon, flown triumphantly touching stars. Creative thinking at its highest, has been as important as any other human quality in changing and reshaping the world.

The scientific and technological advancement of today or what they call it 'Space Age', is a long journey from stone-age to nuclear-age. Today, there is tremendous expansion in social, economic, political and religious fields all over the world. The development of industries, discovery of atomic energy and excellency in artistic works had opened up many possibilities for further advancement in the field of space researches. There are computers, calculating machines, fastest jetliner in the sky and trains on the surface, accelerating the pace of research for the welfare and betterment of mankind. A question which is hardly asked by many is,
"Who's responsible for this tremendous progress that mankind has attained." The answer is, "a relatively small proportions of world's population - high creative individuals."

Indeed, behind every achievement of human race is a germ of creation growing in the mind of some lone individual whose dream waken him in the dead of night while others lie contentedly asleep. We need such dreams because today's dream represents tomorrow's reality. The progress and survival of mankind will eventually depend upon how effectively the most precious human resources of creative children are conserved and utilized.

It is also true without proof, that for a developing country like India where problem like mass illiteracy, communalism, poverty, wastage and stagnation, religious bygotry etc. often shakened the unity of the nation, the only hope of solutions for these, lies with a few creative people. Because, they are those who can see through the problems for the right solutions. They will give education to the illiterates, harmony to the disharmony, peace to the peaceless, negotiation to the disputes. They are those who are going to re-boundarise the world for one humanity, one nation, one language and one understanding.

A while look back to the scientific and technological and cultural fields will also help us to prove the point
true. Centuries ago, man dreamt of flying like birds, but today his dream is realised that he could fly even better than the birds. Modern facilities like radio, television, wireless, cinema, aeroplane, telephone, vehicles, steamers, rockets, medicines, refrigerators, nuclear energy, satellites etc. which were not existed in their present forms, are just the creation of man. In the field of art too, you only find solace and could avoid worries when the genius Leonardo's creation 'Monalisa' smiles from your walls. Such is the power creative thinking has, and such is the power a creative person possesses.

Thus, we need today, so deliberately outstanding men and women with real originality, flexibility and imagination even to solve problems concerning national integration, communal harmony, caste stratification, religious rivalry, narrow tribalistic outlook, corruption, illiteracy, famine, draught etc. in the country and even the world. Hence, without any hesitation it may be stated that almost every phase of life activity today is in dire need of creative people — people with vision, originality and initiative and ingenuity. The world is paying large premiums to those who can invent a new idea, a new device, a new way to make something novel. Indeed the present age is taking man to places where old and comfortable ideas do not apply.
Threat to man's survival challenges to consider what man may become at his best and to reach new ways to helping his young generation realise their creative potential. Our hope for future health, prosperity, peace, pleasure and even survival of this planet depends upon the kind of knowledge and understanding that are yet to be released from these budding creative thinkers.

1.3.0. Vocational Preferences

Preference for a vocation which is suitable to one's interest, ability and need, is one of the most important requirements in the life of every modern citizen. It is true that inspite of the agony of unemployment, there are still many who are suffering even after they are well placed in certain vocations of high prestige or earnings. The reason being the fact that every occupation is not everybody's interest or capability. Wrong choice of an occupation can make a person turn against his own occupation and lead a displeased professional life jrefuting to everything around him. Hence, it is essential for a person specially - a youth who is just at the threshold of taking up an occupation to give ample scope to expose himself to differential occupational situations and let him find out or develop his interest for the vocation he has natural inclinations, at the right time or age.
1.3.1. World of Work

Before proceeding further, it may not be out of place to have a peep into the world of work and try to familiar with some of the terms like 'world of work', work, position, employment, vocation, profession, career, job, vocational choice, and vocational preference, which are going to be used more often than once in the later part of the thesis.

Feingold and Swerdloff (1969), in their book entitled, 'Occupations and Careers', have described the terms world of work, work, position and employment, as given below:

World of Work: The sum total of all the kinds of work - from very simple to highly complex - in which men and women of today engage in order to earn a living.

Work: Any kind of planned and responsible activity in which an individual engages with an expectation of getting a gainful return for his efforts.

Position: A position is a group of tasks performed by one person. There are always as many positions as there are workers in a plant or office.

Employment: It is any kind of work for pay or profit.

Webster Merriam (1971) has described the terms vocation, profession, occupation, job and career in the following manner.
**Vocation:** It is defined as a strong inclination to a particular state or course of action. It is the special function of an individual or group.

**Occupation:** Occupation is an activity in which one engages or the principal business of one's life.

**Profession:** A special calling requiring specified knowledge and often long and intensive academic preparation. It is also defined as a principal calling, vocation or enjoyment.

**Job:** It refers to the specific duty, role or function, a regular remunerative position; a process of doing a piece of work.

**Career:** It is a profession for which one trains and which is undertaken as a permanent calling.

Again, 'career' is defined as a course of an individual taken in his progress through life. It may include a variety of jobs and a number of different occupations (Feingold and Swerdloff, 1969).

'The 6th International Conference of Labour Statistics' also adopted the following as the definition of an occupation: 'An occupation is a trade, profession or type of work performed by an individual irrespective of the branch
of economic activity to which he is attached" (Kochhar, 1984, p. 95).

Super and associates (1957) defined vocation as the person-centred aspect of work. It is also defined in the Random House Dictionary (1967) "as a particular occupation, business or profession; calling ... strong impulse or inclination to follow a particular activity or career." Thus, in the light of the definitions given by different individuals, it may be stated that a "vocation is a kind of engagement or course of action or activity which a person inclines to be in, for which he requires a specialized knowledge and from which he gains some benefit - in terms of money, respect and satisfaction for the fact that he has done something good for himself as well as for others or society."

It may be useful to distinguish between the terms vocational choice and vocational preference. In vocational choice, the individual predicts what he probably will do among two or more vocations. For instance, "What kind of work do you feel you are best prepared to do at present?" (Gilger, 1942).

And, in vocational preference the individual indicates, what vocation he would like to do most from among some
vocations. He gives his preference to the most desired or liked vocation according to his preference. For example, "What vocation or life work do you want most of all to undertake?" (Gilger, 1942).

It may also be viewed that the two variables are distinct to the extent that they differ in representing the reality-oriented selection of occupations. Vocational choice, for that matter, is considered to be more realistic than vocational preference. However, they are of the same nature as they all involve the selection of an occupation regardless of the basis for the selection. But the term vocational preference is preferably used for the purpose of the present study.

1.3.2. Vocational Development

Another important issue which need equally serious attention is - Vocational development in the life of a person. It goes, "how does the vocational development take place? Since when, and how long, in the life of a young adolescent, and how to detect that, and guide him for the right preference of vocation in consonance with his talent, for a happy and contended life in future?"

Similar to any other aspects of development, vocational development may be conceived of as beginning early in life and as proceeding along a curve late in life. For
instance, a four-year old child who plays the role of a policeman or soldier while playing, is a very early stage of vocational development and, an old-man of sixty who does not work for money but still keeps himself busy with writing books in the field of his specialisation, is going through the late stage of vocational development.

Buehler (Kochhar, 1984) has classified vocational development into five (5) stages in the life of an individual. They are:

1. Growth (0 - 14 years) - more or less fantasy choice or not very realistic choice, frequent change in attitude;
2. Exploratory (15 - 24 years) - with the sub-stage of fantasy which may be tentative or realistic with appropriate attitudes towards work and occupation;
3. Establishment (25 - 44 years) - beginning with trial and progressing into a stable position as the individual begins to make his place in the world of work;
4. Maintenance stage (45 - 65 years) - characterised by stability in the field in which establishment has taken place earlier in life; and
5. The decline state (65 onwards) - characterised by declination during the early part and progressing into one of retirement.
Buehler's classification seems to be supported by the findings of a study conducted by Ginzberg and others (1963). The study concluded that an individual never reaches the ultimate decision of his vocational preference (choice) at a single moment in time, but through a series of decisions over a period of years. They have also divided the process of occupational decision making into three distinct periods, (i) 'the period during which the adolescent makes what can be described as a fantasy choice'; (ii) 'the period during which he is making a tentative choice'; and (iii) 'the period when he makes a realistic choice'. They pointed out that the second period coincides, by and large, with early and late adolescence, of course, with a few exception of realistic choice during childhood.

Thus, the process of vocational development is a continuous and ongoing one. It is essentially that of developing and implementing a self concept, a product of the interaction of inherited aptitude, neural and endocrinal make-up, opportunity to play various roles and evaluation of the extent to which the results of role played meet with the approval of supervisors and fellows.

1.3.3. Vocational Preferences and Creative Thinking of Teenagers

Unemployment, underemployment and unsuitable employment are some of the major problems that the country is
facing at present. Educational institutions are charged with the responsibility of developing vocational behaviour which may be helpful in solving some of these problems. In other words, education must meet the requirements of the individual as well as the society.

Right type of curricular choice and vocational preference has a close relation (Singh and Singh, 1967). Today, this consciousness has come to occupy a central place in the life of our blooming talents who are aspiring for higher achievements with satisfactory vocations. Therefore, the 'reality principles' followed at the initial stage can ensure maximum utilization of one's talents, aptitudes, interests, motivations and aspirations. Thus, there is to be a meaningful and realistic relationship between one's educational pursuits, talents and vocational preferences.

Frank parson (1909) was the first to give his ideas on the importance of vocational preference in life and the possible close relationship between our desires (environment) and internal endowments (heredity). He makes his concept clear through the sentences given below:

"No step in life, unless it may be of the choice of a husband or wife, is more important than the choice of a vocation.... These vital problems should be solved in a careful, scientific way, with due regard to each person's aptitudes, abilities, resources and limitations, and the relations of these elements to the conditions of success in different industries."
He further throws light on the importance and suitability of a vocation which ultimately brings success and happiness in life in the following lines:

"An occupation out of harmony with the worker's aptitudes and capacities means inefficiency, unenthusiastic and perhaps distasteful labour, and low pay; while an occupation in harmony with the nature of the man means enthusiasm, love of work, and high economic values - superior product, efficient service, and good pay. If a young man chooses his vocation so that his best abilities and enthusiasms will be united with the daily work, he has laid the foundation of success and happiness."

Again, Holland (1966), has given a new turn to the meaning of vocational preference that preference of an occupation is an expression of personality. He said that,

"What we have called vocational interests are simply another aspect of personality... The choice of an occupation is an expressive act which reflects the person's motivation, knowledge, ability and personality. Occupations represent a way of life, an environment rather than a set of isolated work functions or skills."

In the light of the importance of choosing a suitable vocation by a young adolescent, William Gillman observed that,

"Each individual has a characteristic vocational pattern which reflects his personality structure and influences all aspects of his vocational life from choice through occupational planning to job judgement. The meaning
of work to the individual, ability to desire, satisfaction from work, motivation, mobilisation of energy in a work situation, capacity to adjust to interpersonal relations in the job, positive and negative work identification and ability to adjust work pressures are the main aspects of vocational pattern.

He further says that, "the most important of these, is the meaning of work to the (young) individual." In so far as the work expresses the goals and aspirations of a given individual, the meaning of work determines the characteristics nature of his vocational pattern, its rigidity and flexibility and the extent to which it meets his creative needs.

These days many young men and women go through life without making much a success of it because they do not take up the vocation they are best suited to follow and, hence, they do not find their true place in life. As a result, they struggle in life without achieving much or leading a half-defeated life. It is for this reason that the primary concern of a young man or woman is to find out the right occupation for himself or herself at the right time, the occupation for which he/she is best fitted by nature, inclination and accomplishments, and then adopt that as his/her occupations in life.

Whatever an individual is going to prefer or desire always have a close connection with his natural endowments -
whether it be intelligence, creativity or any other. Psychologically also it is very true that, every physical movement (speaking or behaving) has its corresponding movement in our mind). Our mind, as Freud says, 'is the source of everything'. This is the place where all the earnings of our abilities are accumulated, fertilised and breed to new ideas which comes out in the forms of desires, preferences, choices or decisions in response to the differential environmental conditions. Whether it is external or internal desires - there is always a connection with our talents just like the network of railway tracks in a massively large train-yard. This fact can be justified, once again, by quoting the lines run in the preamble to the constitution of UNESCO, which says, "Since war begins in the minds of men it is in the minds of men that the defences of peace must be constructed." So it is the mind which is responsible for both war and peace. In the same manner, it may be stated that whatever is going to express by an adolescent is partially or fully the product of his endowments (talents) of course, in response to the environment. Even in the case of expressing desire or preference for certain vocations by a teenager can be linked up with his talents.

Thus, in the light of the above discussion, it may be concluded by re-quoting Holland (1966) that, "The choice
of an occupation is an expressive act which reflects the person's motivation, knowledge, ability and personality."
So does the ability of a teenager and his vocational preference.

1.3.4. Vocational Aspect of New Education Policy

The programme for vocationalization of higher secondary education was first initiated in 1976 with the appearance of a document "Higher Secondary Education and its Vocationalization", published by National Council of Educational Research and Training (NCERT). Since then, it has been implemented in many states and union territories.

Being aware of the need and importance for diversification of Secondary Education - its vocationalization, the Ministry of Human Resource Development (MHRD), Government of India and NCERT have initiated many actions and made many proposals.

However, in spite of all these efforts, the scheme of vocationalization of education has not yet picked up in many states until recently. There have been many factors responsible for the slow implementation and progress such as, absence of a well-coordinated management system, unemployment of vocational pass-outs, mis-match between demand and supply, reluctance in accepting the concept by the society,
absence of proper provision for professional growth and career advancement for the vocational pass-outs etc. Renewed efforts are being made in many states to accelerate the progress. Therefore, urgent steps to strengthen the vocational education system are imperative, the New Policy Urges.

1.3.4.1. Programme of Action

The policy statements concerning the system for vocationalization have been clustered with reference to inter-related objectives, properties and programmes into four key areas so as to ensure logical development of programmes of action. These areas include: (i) Development of the system, (ii) Vocational Education Programmes, (iii) Programmes for special groups and out of school population, and (iv) Targets and preparation for development.

For facilitating employment, steps will be taken to change recruitment rules for selection in government departments at central and state levels and public sector in order to give weightage to vocational stream graduates in posts appropriate to their vocational courses. For this purpose, a Monitoring and Evaluation Cell (MEC) in the Bureau of Vocational Education will be set up with proper linkage to Central Institutes of Vocational Education (CIYE), NCERT, and other concerned agencies.
Giving heed to the principles and proposals of the New Education Policy, now, many states, in the country, have started implementing the new uniform pattern of education and its programme of vocationalisation at secondary stage. Decision has been made in Nagaland too, that the new pattern will start functioning in the state from 1990 academic session onwards. Introduction of SUPW in the curriculum of lower classes has been done in the schools of Nagaland. Survey work concerning introduction of vocational subjects at pre-university level of education has also been under way.

1.4.0. Conclusion

From the discussion, it can be concluded that the Nagas are a distinct group of people which have its own cultural identity and traditional ways - constituted by different tribes and sub-tribes. Among them Angami and Ao are the two major advanced tribes which have similarities as well as marked differences as Naga tribes. Quite a good number of brilliant youngsters from the two tribes have already come out and shown their excellency in various fields, yet many are still in the budding stage looking for help.

It has also been seen that creative thinking is the kind of thinking process which goes for finding new ways or solutions to problems. It plays a vital part in man's
life. It is this power of man that has crowned him to be
the master of creation. Man's long journey from stone-age
to space-age is simply the story of his series of creative
works. In fact, the hope of future peaceful existence of
mankind depends upon this rare quality.

On the other hand, 'vocation' as defined by Webster
Merriam (1971) is a 'strong inclination to a particular
state or course of action. It is the special function of
an individual or group.' Preferring of right vocation at
the right time often became a factor responsible for future
success in life (Merdan, quoted by Kochhar, 1984).

It is mainly on the basis of the differences the
two tribes (Aos and Angamis) have which give a good reason
for a comparative study of the vocational preferences and
creative thinking of the two groups of teen-agers who are
brought up in the two distinct cultures, that the investiga-
tor took interest and decided to take up this study.
THE ANGAMIS

A SITTING PLACE

ANGAMI COUPLE

TRADITIONAL CAME BRIDGE

TUG-OF-WAR - A VILLAGE SPORT
ANGAMI WARRIOR

DIFFERENT TYPES OF ANGAMI SPEARS

ANGAMI DANCE
TRADITIONAL KHZEKHEWOMA STONE

REMINISCENCE OF ANGAMI CULTURE
PROCESSIONAL AO DANCE

TYPICAL NAGA-HOUSE