Chapter II
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“Education imparts intellectual culture; intellectual culture secure capacity and stability; Capacity and stability enable to secure wealth; Wealth as secured enables to conform to dharma’s which in turn secure happiness. Education provides hope for the modelling and shaping of the conscience and values of the future generations” (Hitopadesh, cited in Life Ahead: Krishnamurthy, 1859). Importance of education is to create a more sustainable future and it holds the promise to gear up sound economic development on a sustainable basis. Education is a decisive factor in enabling people to become productive and responsible member of the society. Science education has a leading role in catalysing development. Investing in education is now globally regarded as one of the centrepieces of development. Science education is expected to provide the opportunity to acquire essential knowledge, skills and attitude required to function in the modern world. Science education emphasises the acquisition of skills and competencies for the productive application of acquired knowledge. Hence good science education is important for every child. What the future holds in store for human beings, the nation and the world depends largely on the wisdom with which science and technology is used and that, in turn depends on the character, distribution and effectiveness of the education that people receive (Rothkopf & Blaney, 1991).

Our fast-paced society compels us to address education for the new millennium. “The way we have organized ourselves for education reform has little to do with the ways students learn.” (Parnell, 1995) Parnell further states that, “recent studies on brain structure and function reinforce the contextual learning contention that connecting content and context application is not only helpful to
learning, but essential. In addition, studies in the area of intelligence and the development of theories of intelligence underscore the contextual learning emphasis that education be focused on the needs of the learner, not the needs of the teacher or the educational institution”.

Science helps the children to understand and appreciate the world. When children explore and learn about the world around them and how it work, they gain a better understanding of and appreciation for nature and the interdependence of living things and their environment.

Since 1960, the teaching of science becomes a major concern that it received global attention. This was a period of intense and vigorous development in the science curriculum marked by the publication of major projects. A recurring and significant feature of most of these curriculum proposals was a major shift in emphasis away from the teaching of science as a body of established knowledge towards science as a human activity with increasing importance on the process and procedure of science. The curriculum projects were frame in such a way that children should enjoy science through direct engagement in scientific activities.

2.1 Importance of Context for Teaching Learning

Context gives meaning to content. The broader the context within which students are able to make connections then the content will be easy to learn. A great part of the teachers’ job is to provide context. When students are able to connect their academic lesson to the context, they will learn more meaning from these lessons.
Thus the choice of context depends on the background and learning objectives of the students. The choice of context for exploration should be as simple and straightforward as possible so as to avoid the introduction of unnecessary details that may cause confusion. Contextual exploration includes the elements of observation, analysis and experimental activities. Learning context is defined as the situation in which learning occurred, situations that can impact how learn. Tool for learning context is the external learning environment, the quality of equipment, facilities and the training level of the teacher.

Contexts are typically defined from the perspective of the user, or in our case, the learner context as being the learner's environment. There are three major environments: the learner's external environment (classroom, working place, family, society, etc.), internal environment (previous beliefs, thoughts, hopes, etc) and digital environment.

Objects in a context are 'placed' in a context, that is, by one means or another, they stand in the relation of being 'contained in' the space. Contextual examples should be interesting and familiar to students. The examples are best easily observed in real life, or are widely reported ones like social issues, or examples related to students' lives.

1. Good contextual examples should allow students to observe clearly and concretely. The physical phenomena to be learned in an unambiguous manner. Situations that are too complicated or unrealistic may easily misled students that should be avoided. Contextual examples should be familiar to students. It should be noted that, what we call familiar is sometimes quite
personal, and will vary with the students' background, life-style and geographical environment. The word "familiar" used here not necessarily means the events that happens close to the students. Certain social issues, or topics widely reported by the media, can also serve as appropriate contextual examples. This kind of information can turn into good teaching material after appropriate editing, and is certainly helpful to students. The teacher's ability in guiding the students is crucial in the application of contexts. The teacher should be constantly able to flexibly utilize examples that are familiar or attractive to students, or that serve to broaden the students' perspectives and bring out real science.

2. Students should have the opportunity to make use of their knowledge to solve problems inside a context. Students can participate in a learning activity to obtain the data from a real environment, or perform the analysis and exploration with computer digital videos or data provided by the teacher.

Context-dependent memory refers to improved recall of specific episodes or information when the context present at encoding and retrieval are the same. For example context-dependence at work occurs when an individual has lost an item (e.g. lost a pen) in an unknown location. Typically, people try to systematically "retrace their steps" to determine all of the possible places where the item might be located.

The research literature on context-dependent memory describes a number of different types of contextual information that may affect context-dependent
memory, state-dependent learning, cognitive context-dependent memory and mood-congruent memory. Research has also shown that context-dependence may play an important role in numerous situations, such as memory for studied material. (Flavell, 1978).

Objects occur in context, and we can use context to help us to recognize object. (Anderson, 2007). Context serves as a catalyst for students to utilize their disciplinary knowledge. Context presents a forum for further formation of their personal values, and professional development. “Contextual Learning assumes that the mind naturally seeks meaning in context--that is, in the environment where the person is located--and that it does so through searching for relationships that make sense and appear useful.” (Hull, 1993)

The context of teaching includes anything in the surrounding environment: physical, social, institutional and personal, that influences teaching and learning. Interactions between teacher, students and the cultural norms play a significant role in what can and does occur in the classroom.

2.2 Contextualisation

According to Contextualism, Intelligence must be understood in its real-world context. It may be focused narrowly, as on the home and family environments, or it may be extended broadly into entire culture. Cross-community differences have been correlated with difference in performance on intelligence tests. Context–related differences include those of rural versus high proportion of teenagers to adult within communities, and low versus high socioeconomic status of
communities (Catrambone & Holyoak, 1989). The process of representing any object or concepts in the background of context is called contextualisation (Bond 2004).

A common syllabus and common textbooks are certainly not to be expected for the country as a whole. School systems in different states must devise their own curriculum. Within the broad guidelines of the curriculum framework the syllabi and the textbooks must allow space for contextualizing and variations at the local level for all stages of school education (NCRT, 2006).

Meaning requires understanding whole as well as part, and part must be understood in the context of whole. Teacher must focus on making connections between facts and fostering new understanding in student. Instead of spending time memorizing material, filling in the blank on worksheet and repeating large number of similar problems, students need to learn to solve novel problems, integrate information and create knowledge themselves.

Context is approached here as the interactive everything in which learning is situated for an individual learner or a group, with parts that cannot be meaningfully separated. (Finkelstein, 2005). Contextualisation occurs not only as a result of the planned curriculum but through every other aspect of the learner’s experience. Contextualisation requires that there is something to be contextualised; there is a direct connection between context and concepts. (Rivet and Krajcik, 2008). We are condemned to context in that it is inherently connected to our learning and we must consider context intentionally or inadvertently scaffold for students. (Tessmer and Richey, 1997). Without context any knowledge is of limited use and incomplete (Spiro, 1988).
By integrating academic content with situations or issues that are meaningful to students, instructors can help the students to acquire skills more rapidly. This type of learning, frequently called contextual learning. Recent research in cognitive science recognizes that learning is a complex process that involves social, personal and environmental aspects of an individual.

Contextual Learning aims to provide students with knowledge that can be flexibly applied (transferred) from one problem to another and from one context to another. It is important in contextual learning in which students really learn from the beginning of knowledge, experiencing. In contextual learning context of students daily lives are linked to the concept of subjects studied in class, and then it is possible to implement in their daily lives.

Contextualists consider intelligence to be linked to culture. They view intelligence as something that a culture creates to define the nature of adaptive performance in that culture. It further account for why some people perform better than others on the task that the culture happen to value (Sternberg, 1985). The theorists who endorse this model study how intelligence relates to the external world. In general, definition and theories of intelligence will more effectively encompass cultural diversity by broadening in scope. Studies reveal that culture might play a role in how we define and assess intelligence (Sternberg, 1985). Construction of new knowledge in science is strongly influenced by prior knowledge, that is, conceptions gained prior to the point of new learning. (Mulyadin & Taufik, 2010).
2.3 Contextual Intelligence

Contextual intelligence is particularly concerned with the ways people effectively shape their environment, adapt different context, and make the most of their available resources. Contextual intelligence refers to ‘street smarts’ or ‘situational smart’ practical abilities and are involved in applying, using implementing and putting things into proceed (Sternberg, 1997).

From young age students are active using and do not learn by sitting and listening to a lecture alone, and they may not get excited when the teacher asks them to memorise the capital of all states. The student may be thinking, why should I memories the capital- if I want to know the capital of a state I will Google it. Hence the teachers’ role is to foster and direct work on the part of students. The teacher encourages students to use be cognitive activities to internalise knowledge and then to reflect on and talk about what they are doing and how their understandings are changing. Instead of spending time for memorising material, filling in the blanks on worksheet and repeating large number of similar problems, students need to learn to solve problems, integrate information and create knowledge for them. The changes require in the way we view teaching. Many still believe that it is not education but the children who must change. The paradox is that children will not change until we change the environment for their learning both internally and externally. In order to make learning according to constructivist approach it is essential to make the teaching learning process learner cantered in which learner is the focal point in the learning endeavour (Caine & Caine, 1993).
Contextual learning starts from the premise that learning cannot take place in a vacuum, but should somehow be connected with real world attributes to make sense to learners. This notion is of great importance for workplace learning, professional development, lifelong learning and meaningful learning at schools. Today, digital media tend to bring about new dimensions of context: internet connections and mobile devices enable learners to overcome restrictions of time and location, and neglect the physical boundaries and limitations of the learning environment.

2.3.1 Cultural Context and Intelligence

According to Contextualism (Lave, 1988) intelligence must be understood in its real world context. Contextualist considers intelligence to be inextricably linked to culture. They view intelligence as something that a culture creates to define the nature of adaptive performance in that culture. (Sternberg, 1985). There has been a paradigm shift from a conception of learning as a set of individual decontextualized cognitive process to a conception of learning as a socially organized activity that is inseparable from its socio-cultural locus in time and space (Ceci & Roazzi, 1994).

2.4 History of Contextual Teaching Learning

The social constructivist paradigm views the context in which the learning occurs as central to the learning itself (Zulmaulida & Rahmy, 2011). Underlying the notion of the learner as an active processor is "the assumption that there is no one set of generalised learning laws with each law applying to all domains" (Reigeluth, 1987). Decontextualised knowledge does not give us the skills to apply our
understandings to authentic tasks because, we are not working with the concept in the complex environment and experiencing the complex interrelationships in that environment that determine how and when the concept is used. (Lampert, 1984)

One social constructivist notion is that of authentic or situated learning, where the student takes part in activities directly relevant to the application of learning and that take place within a culture similar to the applied setting (Brown et al., 1989).

Contextual Teaching Learning approach was derived from the theory of behaviourism and then continued with the theory of constructivism. In contextual teaching and learning, students could construct their own knowledge by testing ideas based on the prior knowledge and experience, applying these ideas to a new situation and integrating the new knowledge gained with the pre-existing intellectual construct (Berns & Ericson, 2001).

Both the theory of behaviourism and constructivism include the direct instruction in teaching and learning process. In this case, the positions of behaviourism and constructivism theories related to the development of Contextual Teaching Learning (CTL) were behaviourism as a means for measure the students’ observable behaviours when they took apart in teaching and learning process while constructivism as a way to help them to construct the knowledge. That is the reason why CTL has the abbreviation of Contextual Teaching Learning because it is a Learning activity based on life context (Berns & Ericson 2001). Contextual Teaching and learning is a learning philosophy that emphasizes the students’ interest and experiences. It provides the means for reaching learning goals that requires higher order thinking skills (Kerr,2007). The process of sharing individual
perspectives-called collaborative elaboration results in learners constructing understanding together that wouldn't be possible alone. (Greeno, Collins & Resnick, 1996). (Downes, 2006) argues that reality is constructed by our own activities and that people, together as members of a society, invent the properties of the world.

We are living in a fast-paced world in which school as preparation for life takes on new meaning. It is clear that equipping children with a set of static facts and procedures is poor preparation even for those students who “stick it out” and graduate from high school.

Contextual Teaching Learning is a system of instruction based on the philosophy that students learn when they see meaning in academic material, when they see meaning in academic material, and they see meaning in schoolwork then they can connect new information with prior knowledge and their own experience. It also satisfies the brain’s need to connect new information with prior knowledge and to shape its physical structure in response to the environment.

The Contextual Teaching Learning system consists of eight components: making connections that hold meaning, self regulated learning, doing significant work, collaboration, critical and creative thinking, nurturing the individual, reaching high standard and using authentic assessment. Contextual Teaching Learning offers a pathway to academic excellence all students can follow (Clark, 1997).

According to Contextual Teaching Learning theory, learning happens when students can process and manage new information became their own understanding
and save it in their memory (Johnson, 2002). To get a good understanding, the multiple aspects of any learning environment, like classroom and laboratory became the focus of this theory. When the students get the understanding, they can create a concept of knowledge, because it comes from process discovering, reinforcing and relating.

Contextual Teaching Learning is a theory which is based on the notion that learning can only occur when students are able to connect between content and context (Foster, 2007). Contextual Teaching Learning as a concept of learning that help teachers link between the materials taught with real-world situations of students and encourage students to make connection between the knowledge possessed by its application in their lives as family members and the community. (Kerr, 2007)

Contextual Teaching Learning engages students in significant activities that help them connect academic studies to their context in real situations. By making these connections, students see meaning in schoolwork. When students formulate projects or identify interesting problems, when they make choice and accept responsibility, search out information and reach conclusions, then they actively choose, order, organise the academic content to the context of life’s situations. Thus they discover meaning of the content. The discovery of meaning is the central characteristic of Contextual Teaching Learning. Asked to learn something that seams meaningless, students, seem invariably to ask “why do we have to learn this? Rightly they look for meaning, for significance and purpose, in their schoolwork. Children’s quest for meaning is quite natural. Man’s main concern is not to gain pleasure or to avoid pain but rather to see a meaning in his life” (Finkelstein, 2010).
Because the brain constantly seeks meaning and retains the meaningful, teaching should engage students in a quest for meaning. Teaching should let students grasp the personal significance of the lessons they are studying. “The child should make ideas his own, and should understand their application here and now in the circumstances of his actual life.” (Whitehead, 1967). Contextual Teaching Learning has the potential to inculcate interest in all students for learning and as Whitehead said “There can be no mental development without interest, Interest is the base for attention and apprehension (Whitehead, 1967).

Contextual Teaching Learning is a learning system that matches the performance of the brain, to develop patterns that create meaning, by linking academic content to the context of everyday life of learners. Thus information received is not only stored in short term memory, which is easily forgotten but can be stored in long term memory that will be internalized and applied whenever needed.

Contextual Teaching Learning is called contextual approach because the concept of learning that help teachers to link between the content to be studied with real world situations of the students and encourage students to make connections between the knowledge possessed by its application in their lives.

Main tenets of Contextualism in learning is that, learning occurs only when students process new information or knowledge in such a way that can be absorbed in to their minds and they are able to applied with real life around them. According to Contextual Teaching Learning method learning activities should not be done in the classroom itself, but could be done in the laboratory, the work place, or in the
other places. Teachers should be smart to choose and design learning environment that really relate to real life, both. Hence students have knowledge and skills to construct a dynamic and flexible activity of their own understanding. In Contextual Teaching Learning teachers are required to assist students in achieving their goal. Here the teacher simply manage the class as a team that work together to find something new for students.

Educational theories and themes that relate to Contextual Teaching Learning include knowledge-based constructivism, effort-based learning and incremental theory of intelligence, socialization, situated learning, and distributed learning. Contextual Teaching Learning requires that teachers plan lessons that are developmentally appropriate for students; include interdependent learning groups; provide for an environment that supports self-regulated learning by considering the diversity of students, addresses the multiple intelligences of students and include authentic assessment. In implementing Contextual Teaching Learning, teachers serve as facilitators, organizers, role models, learning mentors, content specialists, and knowledge dispensers. Contextual Teaching Learning increasingly becomes a part of reforms of technical education and academic education.

Contextual teaching and learning is a model of teaching and learning based on competence by moulding the students to prepare their individual competence. Contextual teaching and learning is conception of teaching and learning that helps the teacher relating subject matter to real world situation. (Ben and Erickson, 2001).
2.5 Learning Theories - Support for Contextual Teaching Learning

Several learning theories support contextual teaching and learning. (Baker, Hope & Karandjef, 2009).

Motivation Theory:

In this paradigm, learners are assumed to be self-directed, enriched by a diversity of personal experience, ready to learn, Life-Centered, Task-Centered and Problem-Centered and motivated by internal factors.

Social Learning Theory:

The research on the effectiveness of Contextual Teaching Learning strategies is well supported by theories involving collaborative learning. Collaborative learning rests on social cognitive theories suggesting that students’ learning can be facilitated and enhanced by connectivity to peers. According to this theory, students and instructors need to understand each other’s roles and further, students must learn collaborative skills in order for this approach to be successful.

Cognitive-contextual theories

Cognitive-contextual theories deal with the way that cognitive processes operate in various settings. Two of the major theories of this type are that of the (Gardner, 1983) and that of (Sternberg, 1985).

Sternberg posited three (“triarchic”) integrated and interdependent aspects of intelligence, which are concerned, respectively, with a person’s internal world, the external world, and experience. The first aspect comprises the cognitive processes
and representations that form the core of all thought. The second aspect consists of the application of these processes and representations to the external world. The third aspect of intelligence consists of the integration of the internal and external worlds through experience. This includes the ability to apply previously learned information to new or wholly unrelated situations. The “triarchic” theory holds that more-intelligent persons are not just those who can execute many cognitive processes quickly or well; rather, their greater intelligence is reflected in knowing their strengths and weaknesses and capitalizing upon their strengths while compensating for their weaknesses. More-intelligent persons, then, find a niche in which they can operate most efficiently. (Sternberg, 1985) stress the role of experience that is important in evaluating intelligence is the automatization of cognitive processing, which occurs when a relatively novel task becomes familiar. The more a person automatizes the tasks of daily life, the more mental resources he will have for coping with novelty.

2.5.1 Theoretical Rationale for Contextual Teaching Learning

• Nature is interdependent. Nothing in the universe exists or functions in isolation.

• Because humans live in a world of interdependence, “learning” is essentially the process of discovering how concepts relate to each other.

• If A and B are true, then it can be concluded that the only way new, unfamiliar concepts can truly be understood by discovering how they relate to old, familiar concepts.
Therefore, connecting new, unfamiliar academic content to the old, familiar context of students’ knowledge and experiences should enhance their memory and understanding for the things we are trying to teach them.

2.6 Compatibility of Contextual Teaching and Learning and Human Brain Development

Neuroscience has confirmed that brain’s need to find meanings. The brain tries to give new information’s significance by connecting it with existing knowledge and skills. When we are asked to do something that we have not done before then immediately we will try to recall whether we have experienced anything similar. The brain tries to connect the new task with the already recognized one. Once the brains find meaning, its physical and biochemical structure changes as it make neurological connections. (Smith, 1979).

Research on how the brain processes information adds a new dimension to our understanding of the learning process. In the language of brain research, effective instruction creates changes in the brain: that change is “learning.” (Bronfenbrenner, 1979)

Process of child development occurs at the centre of a multilayered set of interconnected environmental systems-the micro, meso, exo-macro systems. The micro-system comprises those who are physically and emotionally closest to the child-usually the family of origin. The meso-system includes socialising influences such as the neighbourhood, the schools and the child’s other peers. The exo-system comprises the influence in which the child is not directly involved, but nevertheless
has an effect, for example parents education. Macro-system includes regional, international or global changes, that is the cultural, ideological and organisational patterns within which the meso-and exo-systems are set (Bronfenbrenner, 1979).

Contextual Teaching Learning is compatible with how the brain naturally develops. As sensory information about the physical environment reaches the brain, different parts of the brain work together to process the information. New synaptic connections between neurons are formed thus creating brain development. The more different parts of the brain work together to process information, the more brain development occurs (Johnson, 2002).

Therefore, Contextual Teaching Learning focus on making connections between content and context promotes brain development. Contextual Teaching Learning results in a greater number of synaptic connections between neurons.

### 2.7 Definition of Contextual Teaching Learning

Contextual Teaching Learning is a conception of teaching and learning that helps teachers relate subject matter content to real world situation and its application to their lives as family, citizen, and workers and engage in the hard work that learning requires (Johnson, 2002). The purpose of Contextual Teaching Learning approach is to motivate the learners to take charge of their own learning and to relate between knowledge and its application to the various contexts of their lives (Zulmaulida & Rahmy, 2011).

Contextual Teaching Learning is a concept of teaching and learning emphasizing on the relation between teaching-learning material and the real world.
The students relate and apply the competence of learning outcome on the everyday life. Furthermore, the teacher uses learning material to teach for the students in order to improve their knowledge and to reach the goal of teaching and learning process (Hull, 1995).

Contextual Teaching Learning enables the cooling down and interesting process of learning because the teaching and learning can naturally continue in anything situation and the students can directly practice everything they had learnt (Woolfolk, 2007).

Contextual Teaching Learning enables the students to use their prior knowledge on solving the problem of learning, and it enriches the students’ existing knowledge. Contextual Teaching Learning model places specific emphasis on delivery of curriculum through contextualized teaching and learning strategies and use of community-based experiences, workplace experiences, and school contexts to inform teaching and learning (Bern & Erikson, 2001).

Contextual Teaching Learning emphasizes higher-level thinking, knowledge transfer, collecting, analyzing, and synthesizing information and data from multiple sources and viewpoint (Parnell, 1999).

2.8 Principles of Contextual Teaching Learning

Contextual Teaching Learning as one of approaches for teaching and learning have attended three modern scientific principle that supports and regulate everythings in the universe namely 1) the principle of interdependance 2) principle of differnetiation and 3) principle of self settings or self regulation (Johnson, 2002).
• **Principles of Interdependence**: Human being could not establish intimacy with one another (Johnson, 2002). It means that Contextual Teaching Learning consists of authentic learning activity that is conducted group, there is no one can intimidate the other’s to follow the certain students. Principle of interdependance teaches that everythings in the universe is interdependant and interrelated. In Contextual Teaching Learning, the principle of interdependance invites educators to recognize their linkage with other educators, with students, with communities and with the environemnt. The principle of interdependance invite students to work togehter, mutual expression ,listening to each other’s to find the problem, designing the plan and seek solutions to problems. The principle is to unite the experience of each individual to achieve high academic standard.

• **Principle of Differentiation**: When the students are different in their creativity, they could be free to explore their individual talents, cultivate their own learning styles, and progress at their own pace (Johnson, 2002). It means that Contextual Teaching Learning approach can be implemented to the students with different characters, talents, and ability. This principle helps to state how the Contextual Teaching Learning helps the students to explore their own talent and can have a big motivation to study based on their life context. The principle of differentiation refers to the constant urge of the universe to generate diversity, difference and uniqueness. Here the students are encouraged to develop at their own pace and be creative and critical thinking in order to produce something useful.
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- **Principle of Self-Regulation**: The principle of self-regulation states that everything is set up, maintained, and recognised by yourself. This principle encouraged the students to empower in full potential. Students accept the responsibility for their own decisions and behaviour, assess alternatives, make choices, develop plans, analyze information, create solutions, and critically assess the evidence.

2.9 Components of Contextual Teaching Learning

Contextual Teaching Learning consists of components that must be conducted as part of its application. There are seven components of contextual teaching and learning that are useful to gain success in applying it (Wijarwadi, 2008; Cited in Mulyadin, Taufik. 2010).

- **Constructivism**: From the history of Contextual Teaching Learning, constructivism is a theory that emphasizes the way how the students construct their own knowledge. It has five steps of learning. They are activating knowledge, acquiring knowledge, understanding knowledge, applying knowledge, and reflecting knowledge.

- **Inquiry**: Inquiry can be practiced by asking, seeking for truth about the information and knowledge. In the teaching and learning activity, inquiry process can be done like formulating problem, collecting data through observation, analyzing and presenting data, and communicating and presenting the result to classmates. This principle shows how learning is conducted by including the process of discovery that needs critical thinking.
Inquiry principle states that, knowledge as the part of learning does not get by considering a number of facts but also from stimulating learning that allows the students to find their own material in the real context.

- **Questioning:** It is the important aspect of learning and it is the beginning of the knowledge. In teaching and learning process, it can be used to check the student understands of the problem which is stimulated by the student’s response, measuring students’ curiosity, focusing student attention, and refreshing students’ prior knowledge. The students’ ask something because they want to know something that they do not know. They are curious to get the answer of their problem.

- **Learning Community:** Contextual Teaching and Learning is conducted in group because its purpose is wants the students to have sharing and discussing section without the intimacy of others. The other purpose is the students can help the others who need their help in positive way.

- **Modelling:** The component of modelling means the teacher gives example to the students if they find difficulties in real way.

- **Reflection:** Reflection is the ways of thinking about what the students have learned and thinking about what they have done in the past. In this case, the teacher can do about the information that acquired in the action.

- **Authentic Assessment:** Authentic assessment: Focus of evaluation change from measuring understanding to measuring application- or students’ ability to perform real world task by applying the knowledge and skills he or she
has learned. Proponent of authentic assessment believe students acquire their knowledge to perform a task or produce a product and assessment should focus on evaluating students’ ability to perform the task and produce the product. Authentic assessment relies on more than one measure of performance, is criterion referenced, and relies on human judgment.

From the authentic assessment perspectives, to be productive citizen, students must be able perform real-world, meaningful tasks. The objective of school is to develop students’ ability to perform the task they will face in the real world. To determine whether students can perform the task teacher must ask students to perform task that replicate real-world challenges.

In authentic assessment there is usually not right or wrong answer, rather we are able or not able to perform a task. During the early 1990s authentic assessment in educational settings increased in popularity (Jensen, 1995). Today authentic assessment plays a significant role in assessing student performance. In the classroom authentic assessment typically requires students to perform task and create portfolios. Some educators claim that authentic assessment is a more and accurate measure of student achievement (Parnell, 1999).

### 2.10 Characteristics of Contextual Teaching Learning

(Johnson, 2002) put forward ten elements of Contextual Teaching Learning. These elements make Contextual Teaching Learning different from other teaching learning theories.
• **Higher Order Thinking**: The learner is required to use critical and creative thinking in collecting data, understanding an issue and solving a problem

• **Standards-related Curricula**: The content for the instruction must be related to real life experience of the students. It includes a variety of local, social, national, international issues.

• **Cultural Responsiveness**: Educators must understand and respect the values, beliefs, and customs of our students.

• ** Meaningful Learning**: The students can learn the materials that make sense to them because the materials itself are gained based on their real life context.

• **Application of Knowledge**: Learned materials have the scope for application in present or future. The students could relate what the materials have gained in the school and also in the various contexts that still exist in real world.

• **Collaborating**: Collaborating is derived from the word “collaborate”. It means that the characteristic of Contextual Teaching Learning is to do the group discussion, to have sharing session what they have known with the other friends.

• **Critical and Creative Thinking**: It stresses on how the students can think critically if they find problem in order to gain the best solution. Besides, they can be creative when there is task that needs creativity.

• **Nurturing the Individual**: Students need help from adult people who mostly have more experience than the young. So, the students should respect the adult people. Thus students learn the importance of being socialised.
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• **Reaching High Standard**: By relating high standard as the characteristics of Contextual Teaching Learning, it can motivate the students to have more frequencies of study.

2.11 Strategies of Contextual Teaching Learning

There are five strategies that proposed by (Crawford, 2002). They are Relating, Experiencing, Applying, Cooperating, and Transferring. It has the abbreviation that is REACT (Crawford, 2002). Relating means that the students to have the ability to relate the prior and new knowledge to get new understanding. Experiencing means the students feel that I should learn this. Use knowledge in day to day life of the learner. Role of teacher is to help them to find the solutions from the problem by constructing new knowledge with hand on experience. Applying means that the strategy intends the students to engaged in hands on problem solving activities. Cooperating means work together. The students discuss or share with other friends in group. The task which is done in group has significant progress than individually. When students cooperate in small group, they can often handle complex problems with little help (Crawford, 2002). Transferring is derived from constructivism that intends the students to construct the meaning of something by their own understanding. Students who learn with understanding can also learn to transfer knowledge.

2.12 Implementation of Contextual Teaching Learning (CTL)

In accordance with the implementation of Contextual Teaching Learning Berns (2001) proposed following strategies.
• **Problem based learning:** Learners are required to engage in problem-solving investigations. This strategy integrates skills and concepts from many content areas. The activity of this strategy such as gathered information around a question, synthesising it and presenting findings to others.

• **Cooperative learning:** An approach that organize instruction using small learning group in which students work together to achieve learning goals. It is done in the form of group discussion where the students can work together with the other friends. It provide opportunity for students to interact with each other and also enables them to gain valuable social skill (Smith, 2006).

• **Project Based Learning:** An approach that focus on the central concept and principles of a discipline, involves students in problem solving investigations and other meaningful task, allows students to work autonomously to construct their own learning and culminates in realistic products.

• **Service learning:** An approach that provides a practical application of newly acquired or developing knowledge and skills to needs in the community through projects and activities.

• **Work- based learning:** An approach in which learning activities are integrated with classroom content for the benefits of students and society.

### 2.13 Role of the Teacher in Contextual Teaching Learning

Contextual Teaching Learning, teachers are requiring to assist students in achieving goal. Teachers simply manage the class as a team that work together to
find something new for students. Lessons in Contextual Teaching Learning should include meaningful contexts that help to create foundational knowledge for future reference. This type of teaching should actively engage students in the learning process by involving students in experiments with a wide range of content and ideas.

The teachers’ role in Contextual Teaching Learning is to plan, implement, reflect and revise lesson. As teachers in Contextual Teaching Learning is regarded as facilitator, organizer of the teaching, learning, assessment process, role model, learning mentor, content specialist, and knowledge distributor. This is the time where students learn by doing what is around them. The teacher could give them problem solving task and encourage the students to make best possible of skill resources. As Contextual Teaching Learning is rooted cognitive theory, the students are expected not only memorizing the material, but also trying to implement the knowledge in the context of daily life.

2.14 Benefits of Contextual Teaching and Learning

Contextual Teaching Learning helps the teachers and students to relate the meaning through prior and new knowledge to get new understanding. So, it is an expectation that the approach can give benefits for teacher and students in teaching learning process. According to Bern, (2001) Contextual Teaching Learning motivates the learner to take a charge of their own learning and to relate between knowledge and its application to the various contexts of their lives. Contextual Teaching Learning can produce the process of learning more meaningful because the students can enjoy their own learning by doing the practical activity and
strengthen students’ memory and understanding of the concept because the students are learning through the material that has taken from their experience and new knowledge. In other words, they relate their prior and new knowledge to get new understanding. So, they will easily remember, recall and comprehend.

2.15 Bringing Science to Life: Role of Contextual Teaching Learning

Contexts are selected on the basis of their perceived relevance to students’ immediate and future lives. Teaching science in this way has come to be known as using a context-based approach. Context-based teaching learning approaches adopted in science teaching where contexts and applications of science are used as the starting point for the development of scientific ideas. This contrasts with more traditional approaches that give priority to scientific ideas first, before looking at applications of knowledge. Context can be used to develop scientific ideas which motivate students and make them feel more positive about science by helping them see the importance of what they are studying. If students are more interested and motivated by the experience they are having in their lesson, this increased engagement might result in improving learning.

Conclusion

Contextual Teaching Learning is an approach that is derived from combination of behaviourism and constructivism theories. Contextual Teaching Learning engages the students to construct the meaning from their prior knowledge then relates it with the new knowledge to get the new understanding. The Contextual
Teaching and Learning emphasizes on the role of students than teacher. In Contextual Teaching Learning, the teacher allows the students to find their own materials in their real contexts. So they are easily to memorize and understand the materials. Contextual teaching and motivates the students to explore their learning, and talent.

According to Contextual Teaching Learning method, learning activities should not do in the classroom, but could in the laboratory, the workplace, or other place. Teacher’s role is to design learning environments that really relate to real life, personal, social and cultural context. So the students have the knowledge and skills to construct a dynamic and flexible actively own understanding. In an environment like that student can find meaningful relationship between abstract ideas with practical applications in real world context, the concept of internalized through discover, strengthen and connect. In recent years an increasing number of developmental psychologists have become convinced that human development should be studied within the context in which naturally it occurs. Context includes not simply a person’s physical surroundings but also the settings constructed by the people present.

2.16 Life Skills

A skill is a learned capacity to carryout pre-determined result often with the minimum outlay of time, energy, or both. People need a broad range of skills in order to contribute to a modern economy and take their place in the technological society of the 21st century. Adolescence is the period between childhood and
adulthood where the individual is confronted by a series of developmental hurdles and challenges. There are normative task such as the development of identity, achieving independence from the family while staying connected and fitting into a peer group, second there are the transition from childhood to adulthood which are characterised by physiological changes in the body, and by cognitive development. It is the time when the individual is required to fulfil social roles with peers and members of the opposite sex, complete the requirement of schooling and make decision regarding a career.

The pressure comes not only from schools and parents but also from the media, peers group and the community as a whole (Coleman, 1987). Research on adolescents and their relationship with the communities within which they find themselves has increased considerably over the past twenty years and in particular in the past decade (Coleman, 1987).

Life skills are a group of psychosocial competencies and interpersonal skills that help peoples to make informed decisions, communicate effectively, and develop coping and self management skills to lead a healthy and productive life. Life skills may be directed toward personal actions or actions toward others, as well as to actions to change the surrounding environment to make it conducive to health (WHO, 1993, 1997, 1998). Life Skills were defined as an ability comprising knowledge, attitude, and skills in managing surrounding problems in the current social situation, and preparedness for self-adjustment in the future relating to sex, substances, gender role, family life, health, media influence, environment, ethics, and social problem.
The (WHO, 1993) has defined Life Skills as the abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life. (UNICEF, 1996) defines Life Skills as a behaviour change or behaviour development approach designed to address a balance of three areas: Knowledge, attitude and skills. Thus in short, Life Skills are essentially those abilities that help to promote mental well being and competence in young people as they face the realities of life.

UNICEF, UNESCO and WHO lists the ten core Life Skill strategies and techniques as Problem solving, Critical thinking, Communication skills, Decision making, Creative thinking, Interpersonal relationship skills, Self awareness building skills, Empathy, Coping with stress, Coping with emotions.

2.17 Life Span Psychology

Within life-span perspective, adolescence can be viewed as a product of child development and as a precursor to adult development. It is not an isolated period of life but an important part of a continuous life cycle. The life span perspective provides a useful approach to investigating the dynamic interrelationship between youth and the community.

1.) Development is influenced by the context in which the development takes place.

As (Bronfenbrenner, 1977) pointed out, the school, the family, and the peer group each influence adolescent development.
2.) Interaction between the individual and their context involve a reciprocal influence (Bern, 2001). That is, individual continue to impact the setting in which they find themselves.

3.) Continuous interaction between the individual and various social context are transactional (Blanchard, 2001). That is the social context like the developing individual, may change over time. Continuities and discontinuities in individual development are influenced by stability and change in the context within which development takes place.

2.18 Developmental Changes

Adolescence is a period of growth and development. Puberty is accompanied by an obvious period of physical change during adolescence. It involves biological changes that include the growth and development of sexual organs as well as the continuous changes to body shape and size (Petersen and Taylor, 1980, Berger, 1983).

While biological changes are generally thought to be complete with the attainment of puberty there in the form of maturing body shape and growth in body size. (Petersen and Taylor, 1980). These bodily and hormonal changes no doubt influence self-image, which in turn exerts an impact on a host of psychological variables (Coleman, 1987). Adolescence is highlighted the search and possible resolution of identity issues (Erikson, 1985).

The impact of socialisation is generally consolidated in the adolescents’ period when psychological changes and social pressure make it important for the
individual to differentiate between the sexes. The psychological changes in turn exert their influence on self image and impact on a number of psychological variables such as self esteem, confidence, shyness, and anxiety.

Cognitive development is another area of major change that takes place during adolescence (Piaget, 1970). During this phase, abstract thinking develops. While it typically first appears during adolescence, many adolescents or adults never manifest the capacity to think abstractly (Lovell, 1968). Adolescents’ self reported concerns and their use of coping strategies include a range of cognitive styles and abilities that reflect different levels of concrete and abstract thinking.

Moral reasoning advances during adolescents to involve concern about the social order. Additionally during this phase, there is the further development of principles, conscience, and moral judgements. Incidence in adolescents’ problems generally related to such factors as alienation from the family, parental abuse, low educational level and limited employment opportunities. Additional evidence of youth stress is shown in the incidence of depression (Lovell, 1968).

Learning Life Skills is a desirable activity on its own as it helps individuals to deal effectively with everyday demands and does not have to be justified as preventing anything. Effective application of Life Skills can influence the way children feel about others and themselves, which in turn can contribute to the children’s self-confidence and self-esteem (Erikson, 1985).

In school besides academics, children also learn social skills and encounter authority other than their parents (Bandura, 1986). Students often look to adults in
the school community for guidance, support and direction (Anusri & Malllik, 2006). Furthermore, schools have a high credibility with parents and community members (WHO, 1997) and thus have a great influence on children and their families. For these reasons the investigator thinks the school is a formidable institution for a Life Skills intervention.

Teachers need to move beyond lecturing to create a stimulating learning environment as Life Skills learning cannot be facilitated on the basis of information or discussion alone (United Nations Population Fund, 2000). Moreover, rote-learning style of Indian education cannot facilitate life skills enhancement as participants merely sit passively taking in information and subsequently merely memorise the lesson (United Nations Population Fund, 2000).

Cognitive development occurs through the child’s conversations, interactions and through problem-solving experiences shared with parents or teachers and also a sibling or peer (Vygotsky, 1978). These people serve as guides and teachers, providing the information and support necessary for the child’s intellectual growth.

The interactions in the classroom not only serve to attain educational objectives but also function as a mechanism through which a teacher and pupil realize their personal and social goals. Social psychology by definition focus on human behaviour as influenced by others (Asch, 1952, Janan and Gerard, 1967; Raven and Rubin, 1976).
2.19 Components of Life Skills

Figure 2.1 Components of Life Skills

- Self Awareness
- Problem Solving
- Dealing with Stress
- Interpersonal relationships
- Decision Making
- Creative Thinking
- Managing Feelings/emotions
- Communication Skills
- Empathy

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2.19.1 Self-awareness Skills

It is the ability to recognize ourselves, our character, our strengths and weaknesses, desires and dislikes. Developing self-awareness can help to recognize when we are stressed or feel under pressure. It is also often a prerequisite for effective communication and interpersonal relations, as well as for developing empathy for others. Self-awareness refers to perception including understanding of feeling, idea, and emotion of the owner in reality and ability to control emotion as well as feeling. It is known as a conscious person who is able to perceive and realize one’s own feeling, idea as well as emotion in reality and also to control one’s own emotion and feeling. Perception and comprehension of one’s own feeling, ideas, and emotion in reality helps to control one’s own emotion and feeling. Variables of self
awareness are, Ability to realize one’s own emotion, Self management, Self assessment, Perception of one’s own ability as well as values.

A person with self awareness can able to tell what is liked or disliked, Always realize one’s own emotion, Able to tell one’s own need, Adjust emotion fast, Control emotion well, Express emotion properly, Tell the cause of one’s own emotion, Tell one’s own strength, Realize one’s own ability, Access one’s own need, Accept others opinions, Tells one’s own weakness.

2.19.2 Decision making Skills

As children are developing, their capacity to make decisions is constantly changing. Being competent to make decisions is not a permanent state. As children mature and achieve the ability to think more logically in terms of cause and effect relationship, they are better suited to understand.

Decision making ability helps to deal constructively with decisions about our lives. This can have impact on health if young people actively make decisions about their actions in relation to health by assessing the different options. Decisions are not are highly affected by the value that one hold, whether that value are societal or personal. When making decision, the alternatives you think about lead to different consequences, some of which may be more satisfying to you than others, depending on the values you hold. A person with decision making ability can use following components to take a decision and decide which is the healthiest or most economical. Identify the goal or purpose to achieve, Identify values, Understand
uncertainty, Identify alternatives, Rank alternatives, evaluate alternatives, choose the best alternative

### 2.19.3 Problem Solving Skills

Problem solving skill enables to deal constructively with problems in lives. The problem solving is a kind of brain process that is complex, composing of visualizing, imagining, manipulating, analyzing, abstracting, and associating ideas. (WHO, 1993) defined as the ability to perceive problems and causes, seek choices, analyze advantage and disadvantage of each choice, assess choices, make sound decision of choice and solution, and implement suitable and correct solution.

Person with problem solving have the ability to classify and matches object by colour size or significant marking, Will ask for help when needed to problem solve as a team, Will offer help to others. Can summarize information, Uses various sources of information, Recognize causes and effect relationship, Can predict outcome, Can draw conclusion, Can identify alternative strategy, Can make decision, Can and choose alternative if needed, Identify resource and tools need for a task.

We engage in problem solving when we need to overcome obstacles to answer a question or to achieve a goal. If we quickly can retrieve an immediate answer from memory, we do not have a problem. If we cannot retrieve an immediate answer, then we have a problem to be solved. This section describes the steps of the problem-solving cycle, which include problem identification, problem definition,
strategy formulation, organization of information, allocation of resources, monitoring and evaluation. (Sternberg, 2003, Sternberg, 1986)

**Figure 2.2. Steps of Problem Solving Cycle**

In considering the steps, remember also the importance of flexibility in following the various steps of the cycle. Successful problem solving may involve occasionally tolerating some ambiguity regarding how best proceed. Rarely can we solve problem by following any one optional sequence of problem solving steps. How people solve problem depends partly on how they understand them. (Lampert, 2001). Our emotions can influence the way in which we implement the
problem solving cycle (Lampert, 2001). Motivation also greatly affects how we solve problems and whether we ever complete them (Zimmerman and Campillo, 2003).

2.19.4 Creative Thinking Skill

Creative thinking skill is the ability to think extensively and diversely without sticking to a particular concept. Creative thinking is a kind of divergent thinking that is the ability of brain to think in different dimensions for new inventions including discovering problem solutions successfully through divergent thinking, composing of originality, fluency, flexibility, and elaboration. Creative thinking contributes to both decision making and problem solving by enabling the individual to explore the available alternatives and various consequences of actions or non-action. It helps to look beyond our direct experience, and even if no problem is identified, or no decision is to be made, creative thinking can help to respond adaptively and with flexibility to the situations of daily lives. Creativity is a combination of three factors; ability, attitude, and processing skill.

Creativity and imagination go hand-in-hand when thinking critically. The goal of creative thinking is to solve problems. Many highly creative people fail to solve problems or to produce worthwhile creative products because they lose sight if what is important or essential.

2.19.4.1 Four stages of Creative thinking

i. Preparation

ii. Incubation

iii. Illumination

iv. verification
Person with creative thinking skill have following characteristic

1. **Intrinsically motivated.**
2. **Able to easily synthesize the ideas.**
3. **Able to exhibit original thought**
4. **Unorthodox in their thinking**
5. **Very imaginative.**
6. **Flexible with ideas**
7. **Nonjudgmental**
8. **Inventive**
9. **Elaborative.**
10. **Able to see multiple perspectives easily.**

### 2.19.4.2 The necessity of Creative thinking Skills

Each of us is called upon to use our creative thinking skills to address open-ended questions. Every problem that has no preset solution and every opportunity that has no prescribed pathway to success demands creative thinking. Because creative thinking pervades all aspects of our daily life--planning at home and planning at work, as well as navigating leisure time and on the job--creative thinking is central to each person's daily life and is an essential Life Skill.

Individuals who are caught in situations and lack creative talents to resolve the situation can become frustrated and dissatisfied because they lack control over their environment. So, nurturing creative thinking promotes mental and physical health.
Increasingly, employers are demanding a work force with creative thinking skills. As automation takes over routine, mundane tasks, employers need problem solvers to handle what automation cannot--resolving those situations without a pre designated solution. Next generation education has to go beyond reading, writing, and computational math. Next generation education has to develop citizens who go beyond following algorithms, and can be the ones to create systems of resolution--both large and small.

Organizations and workplaces are highly competitive. Free-market enterprise is founded on this competition. So, organizations and workplaces have come to emphasize participation management and expect employees at all levels to improve product quality and to improve service quality. This requires an increased ability for creative thinking and problem solving throughout an organization's structure. No longer is creative thinking the province of the Research and Development division; employees within all functions and levels are expected to solve problems creatively and to help produce and to help implement new services, products, and processes.

To help organizations remain competitive, next generation schools must nurture the creative thinking skills of all students. Whether students go on to become engineers or secretaries, machinists or accountants, doctors or nurses, computer technicians or software designers--each will need to use their creative thinking to solve problems. Automation is taking over office and manufacturing processes, and that leaves problem solving as the remaining jobs for the next generation of citizens. Following an algorithm can be programmed into automation; problem solving cannot be formulated and programmed.
Nations that nurture creative thinking are the ones that rise to be recorded in history as advanced civilizations. Ignoring developing creative problem solving means that society will be left behind and surpassed by other nations.

**Nurturing creative thinking skills**

Creative thinking can be developed and nurtured. One of the most widely used and researched processes for nurturing creative thinking is the CPS model (Creative Problem Solving model). The CPS model encompasses three basic elements: (1) problem defining, (2) idea generation, and (3) solution development and implementation. Two basic operations are used throughout the CPS model: divergent thinking and convergent thinking. Divergent thinking involves a broad search for many diverse options; convergent thinking involves a focused search and selection.

Additionally, there is the met cognitive aspect of selecting and applying the elements. Meta cognition is thinking about thinking—stepping back to investigate the methods and directions of thinking being employed. Call meta cognition looking in from the outside on the thinking methods being used. Meta cognition is the awareness of a person's or organization's thinking processes, and the person's or organization's ability to articulate the information that results. This executive function is used to diagnose tasks for the appropriate launch into engaging the CPS model, and then to plan for the appropriate action to follow.
2.19.5 Critical thinking Skill

Critical thinking Skill is the ability to analyze information and experiences in an objective manner. Critical thinking can contribute to mental health by helping to recognize and assess the factors that influence attitudes and behaviour, such as values, peer pressure, and the media. Person with critical thinking must have adequate attitudes towards facts and evaluate arguments including attitudes towards knowledge on data classification as well as hypothesis for reasonable conclusion. The skill required for critical thinking are reactive that is they are used to judge the acceptability of the opinions, conclusions, or responses you might have to give situation. Critical thinking then evaluates one’s own or another person’s perceptions of reality. Critical thinking may manifest itself differently in different context and subject areas. The ideal critical thinker has the ability to clarify, to seek and judge well the basis for a view, to infer wisely from the basis, to imaginatively suppose and integrate and to do these things with dispatch and sensitivity

Critical thinking requires a concern for accuracy and the willingness to persist at difficult task and suppress immediate and easy response. It requires an openness to new ideas which some people find to be the most difficult component. One of the components of critical thinking is conscious reflection on the process of thinking and the evaluation of one’s own thinking process.

Person with critical thinking ability can able to identifying and formulating questions, formulating criteria for judging answers, identifying stated and unstated reason. Seeing similarity and differences, summarizing, asking and answering questions of clarification .why, what, how, judging the credibility of a source,
The main objective of developing Life Skill is to enable the learner to develop a concept of oneself as a person of worth and dignity. Life Skill is a basic learning need for all young people. It will help the young people to empower in challenging situations. An effective implementation of Life Skills will help the youth to practice it in their life. The methods used in the teaching of Life Skills builds upon what is known of how young people learn from their own experiences and from the people around them, from observing how others behave and what consequences arise from behaviour. This is described in the developed by (Hull, 1995). This theory learning is considered to be an active acquisition, processing and structuring of experiences in connection with learners immediate social, cognitive, and cultural context. In Life Skills education, children are actively involved in a dynamic teaching and learning process. The methods used to facilitate this active involvement include working in small groups and pairs, brainstorming, role play, games and debates. A Life Skills lesson may start with a teacher exploring with the students what their ideas or knowledge is about a particular situation in which a Life Skill can be used. The children may be asked to discuss the issues raised in more detail in small groups or with a partner. People on contextual intelligence remain practical or down to earth in life. Such people remain involved in activities such as implementing, using, applying and selecting relevance. Sternberg claim that intelligence is always embedded in a cultural context.
Conclusion

Now in the knowledge explosion society, knowledge is at finger tips. Hence classroom gets a new dimension. In the present context of education classroom becomes the place where the teachers help the students how to live, that is man making education rather than what to learn. Hence it is the duty of the teacher to develop skills and competency among the students to make him an asset to society not a burden. Contextual Teaching Learning theories encourage the students to create their knowledge based on their own experience, applying these ideas to a new situation, and integrating the new knowledge gained with pre-existing intellectual constructs (Berns & Erickson, 2001). (Johnson, 2010) said that Contextual Teaching Learning is based on the discovery that the students find meaning in their schoolwork when they join the content of academic lessons with the context of daily life. Contextualized Teaching Learning (CTL) is identified as a promising strategy that actively engages students and promotes improved learning and development of skills (Baker, Hope & Karandjef, 2009). Education is an important discipline for children as it involves the teaching and acquisition of specific skills. The way in which education is delivered and funded varies across countries, but research into learning style, cognitive developmental stages and the role of children in the classroom has contributed significantly to the type of curriculum that are delivered, teaching strategies and the use of new technologies. The applications of Contextual Teaching Learning and ‘REACT’ strategy in the relation of teaching and learning process is relatively new and gaining momentum especially in the context of present teaching learning process. The theoretical construct on quality in education
leading to Contextual Teaching Learning in education highlights the need for the introduction of ‘REACT’ in the teaching learning process. School education should emphasise not only academics but also the mental well being of children to make it a positive place of learning. Moreover, schools are crucial in building or undermining self-esteem and sense of competence as teachers and peers play an important role in the development of self-esteem of school going children (Woolfolk, 2001). A comprehensive teacher-training programme in Life Skills education would facilitate not only better teachers but also would support children’s educational and mental health requirements (Edwards, 1994; Cohen, 1999; Brooks, 2001). In this manner schools can act as a safety net, protecting children from hazards, which affects their education, developmental and psychosocial well-being. Thus the investigator is highly privileged in the selection of a topic which is gaining wider acceptance in the new global scenario.