1.1 Preface:

Experiential learning is the process of making meaning from direct experience. “Learning from experience” (Itin, C. M. 1999) Aristotle once said "For the things we have to learn before we can do them, we learn by doing them." (Bynum, W. F. and Porter, R. (eds) 2005) David A. Kolb, helped to popularize the idea of experiential learning drawing heavily on the work of John Dewey and Jean Piaget. His work on experiential learning has contributed greatly to expanding the philosophy of experiential education.

We take in information through our senses, yet we ultimately learn by doing. First, we watch and listen to others. Then we try doing things on our own. This sparks our interest and generates our motivation to self-discover.

Think back on learning to ride a bicycle, use a computer, dance or sing. We took an action, saw the consequences of that action, and choose either to continue, or to take a new and different action. What allowed us to master the new skill was our active participation in the event and our reflection on what we attained. Experience and reflection taught more than any manual or lecture ever could.

**Experiential Learning:**

Experiential learning is learning through reflection on doing, which is often contrasted with rote or didactic learning. Experiential learning is related to, but not synonymous with, experiential education, action learning, adventure learning, free choice learning, cooperative learning, and service learning. While there are relationships and connections between all these theories of education, importantly they are also separate terms with separate meanings.

Experiential learning focuses on the learning process for the individual (unlike experiential education, which focuses on the transitive process between teacher and learner). An example of experiential learning is going to the zoo and learning through observation and interaction with the zoo environment, as opposed to reading about animals from a book. Thus, one makes discoveries and
experiments with knowledge firsthand, instead of hearing or reading about others' experiences.

Experiential learning requires no teacher and relates solely to the meaning making process of the individual's direct experience. However, though the gaining of knowledge is an inherent process that occurs naturally, for a genuine learning experience to occur, there must exist certain elements. According to David Kolb, an American educational theorist, knowledge is continuously gained through both personal and environmental experiences. He states that in order to gain genuine knowledge from an experience, certain abilities are required:

1. The learner must be willing to be actively involved in the experience.
2. The learner must be able to reflect on the experience.
3. The learner must possess and use analytical skills to conceptualize the experience.
4. The learner must possess decision making and problem solving skills in order to use the new ideas gained from the experience.

For the adult learner especially, experience becomes a "living textbook" to which they can refer. However, as John Dewey pointed out, experiential learning can often lead to "miss-educative experiences." In other words, experiences do not automatically equate learning. The classic example of this is the lecture experience many students have in formal educational settings. While the content of the course might be "physics" the experiential learning becomes "I hate physics." Preferably, the student should have learned "I hate lectures." Experiential learning therefore can be problematic as generalizations or meanings may be misapplied. Without continuity and interaction, experience may actually distort educational growth and disable an otherwise capable learner. There are countless examples of this in prejudice, stereotypes, and other related areas.

1.2 Rationale For Development Of Kolb’s Experiential Learning:

In the book Experiential Learning (1984), David Kolb describes learning as a four-step process. He identifies the steps as (1) watching (2) thinking (mind) (3)
feeling (emotion) and (4) doing (muscle). He draws primarily on the works of Dewey (who emphasized the need for learning to be grounded in experience), Lewin (who stressed the importance of a people being active in learning), and Jean Piaget (who described intelligence as the result of the interaction of the person and the environment).

Kolb wrote that learners have immediate concrete experiences that allow us to reflect on new experience from different perspectives. From these reflective observations, we engage in abstract conceptualization, creating generalizations or principles that integrate our observations into sound theories. Finally, we use these generalizations or theories as guides to further action. Active experimentation allows us to test what we learn in new and more complex situations. The result is another concrete experience, but this time at a more complex level.

To be effective learners we must (1) perceive information (2) reflect on how it will impact some aspect of our life (3) compare how it fits into our own experiences and (4) think about how this information offers new ways for us to act. Learning requires more than seeing, hearing, moving or touching to learn. We integrate what we sense and think with what we feel and how we behave.

Without that integration, we're just passive participants and passive learning alone doesn't engage our higher brain functions or stimulate our senses to the point where we integrate our lessons into our existing schemes. We must do something with our knowledge.

Praxis is the Greek word that means action with reflection. (Praxis = Experience + Reflection > Action.) In educational situations, we describe, analyze, apply, and then implement our new learning. When we practice a skill, analyze our practice, and then repeat the practice at a higher level, we move practice to praxis. We learn what we're doing.

'Teaching by pouring in' refers to a medieval belief that we could teach people by drilling holes in the human head and with a funnel pour information into the brain. Though we now snicker at that model, we use equally absurd methods
today. As long as professors model passive learning to future teachers as acceptable and useful, instructors will be unprepared and unwilling to use other techniques such as experiential learning.

Likewise, because many of us haven't seen other techniques, we don't know what we're missing. Active learning results in longer-term recall, synthesis, and problem-solving skills than learning by hearing, reading, or watching. Western education needs to move from a learning-by-telling model and even learning-by-observing (as in the case-method) to a learning-by-doing model. We must move from passivity to activity. We must learn to extrapolate from our experiences and see how to apply what we've done to new instances.

The main reason schools haven't integrated experiential-focused theories into all instruction remains a lack of understanding why and how learning-by-doing works. Educators may recognize that experience teaches real-life skills, but they don't see the connection to learning facts. Most teachers still follow the drill-them-and-test-them school of educational thought.

The problem with experiential learning is that in organizations we may not get to see the outcomes of our actions and thus cannot reflect on them to learn. The consequences of our actions may be in the too distant future or affect a part of the organization far removed from ours. Peter Serge reminds us.

We each have a learning horizon, a breadth of vision in time and space within which we assess our effectiveness. When our actions have consequences beyond our learning horizon, it becomes impossible to learn from direct experience. Herein lays the core learning dilemma that confronts organizations [and thus individuals]. We learn best from experience, but we never directly experience the consequences of many of our most important decisions.

We must find ways to learn-by-doing and be able to reflect on what happened. Praxis makes the difference.

Many of us engaged in professional learning have a broad understanding of the work of David Kolb. His highly influential book entitled 'Experiential
Learning: Experience as the source of learning and development' was first published in 1984 since when his ideas have had a dramatic impact on the design and development of lifelong learning models. Of course, David Kolb's work can be traced back to that famous dictum of Confucius around 450 BC.

"Tell me, and I will forget. Show me, and I may remember. Involve me, and I will understand."

1.3 Statement Of The Problem:

The title of the present study is:

“EFFECTIVENESS OF KOLB’S EXPERIENTIAL LEARNING MODEL FOR 9TH STANDARD STUDENTS”

1.4 Clarification Of Important Terms:

1.4.1 Effectiveness:

Theoretically effectiveness means

- the extent to which the goals of the system are attained or the degree to which a system can be elected to achieve a set of specific mission requirements.
- the extent to which a programme or service is meeting its stated goals and objectives.
- the extent to which a development outcome is achieved through interventions. The extent to which a programme or project achieves its planned results, i.e. goals, purposes and outputs and contributes to outcomes.
- adequacy of an instructional system in accomplishing a particular result; the degree to which an action produces a typical effect.
- the extent to which a specific intervention, procedure, regimen or service, when deployed in the field, does what it is intended to do for a defined population.
In present study Effectiveness means enhancement in the score that students obtained after giving Kolb’s experiential learning model programme.

1.4.2 Experiential Learning:

The definitions of Experiential Learning are as follows:

According to http://www.word reference.com dictionary, means….

- Experiential learning is the process of making meaning from direct experience. Aristotle once said, "For the things we have to learn before we can do them, we learn by doing them."
- Learning based on experience.
- Learners taking part in planned real-life activities that are often community based. Learning is facilitated through a combination of planning and preparation, experience, reflection and review
- Experiential education refers to a pedagogical philosophy and methodology concerned with learning activities outside of the traditional classroom environment, with objectives which are planned and articulated prior to the experience.

In the present study, experiential learning means the effectiveness of the learning programme prepared by the investigator using KELM.

1.4.3 Kolb’s Experiential Learning Model (KELM):

Kolb, (1984) provides one of the most useful descriptive models available of the adult learning process, inspired by the work of Kurt Lewis.

Figure – 1.1

Kolb’s experiential learning model
This suggests that there are four stages in learning which follow from each other: Concrete Experience is followed by Reflection on that experience on a personal basis. This may then be followed by the derivation of general rules describing the experience, or the application of known theories to it (Abstract Conceptualization), and hence to the construction of ways of modifying the next occurrence of the experience (Active Experimentation), leading in turn to the next Concrete Experience. All this may happen in a flash, or over days, weeks or months, depending on the topic, and there may be a "wheels within wheels" process at the same time.

A four-stage cyclical theory of learning, Kolb’s experiential learning theory is a holistic perspective that combines experience, perception, cognition, and behavior. Kolb's model therefore works on two levels - a **four-stage cycle**:

1. Concrete Experience - (CE)
2. Reflective Observation - (RO)
3. Abstract Conceptualization - (AC)
4. Active Experimentation - (AE)
In present study KELM means the learning programme prepared by the investigator using KELM.

1.4.4 Students Of Standard IX:

In Gujarat, Education system is divided into three main parts (i) Primary (ii) Secondary and (iii) Higher Secondary. Primary section consists of std. I to std. VIII. Higher Secondary section consists of std. XI and std. XII. Secondary section consists of std. IX and std. X. First year of secondary section is considered as 9\textsuperscript{th} standard.

In present study, 9\textsuperscript{th} standard students are the students studying in the first year of the secondary section in the Gujarati Medium Secondary Schools of Anand District, Gujarat.

1.5 Objectives Of The Study:

The study was carried out with two types of objectives,

(A) Task objectives (B) Research objectives. These objectives are:

(A) Task Objectives:

1. To construct and standardize Achievement Test.
2. To develop KELM programme for enhancing learning of 9\textsuperscript{th} standard students.
3. To implement KELM programme for enhancing learning of 9\textsuperscript{th} standard students.

(B) Research Objectives:

1. To study the effectiveness of KELM programme for enhancing learning.
2. To study the effectiveness of KELM programme enhancing learning in relation to gender.
3. To study the effectiveness of KELM programme enhancing learning in relation to SES.
4. To study the effectiveness of KELM programme enhancing learning in relation to IQ.
5. To study the opinion of 9th standard students for the KELM programme.

1.6 Variables Of The Study:

The variables for the present study were as under:

1. Independent Variables:
   The independent variables for the present study was
   - Kolb’s Experiential Learning Model

2. Secondary Independent Variables:
   The Secondary independent variable for the present study were
   - Gender (Boys, Girls)
   - SES (High, Low)
   - IQ (High, Low)

3. Dependent Variables:
   The dependent variable for the present study was
   - Score obtained by the student of 9th standard on Achievement test

4. Control Variables:
   The control variable for the present study were
   - Standard – 9th
   - Subject – Social Science
   - Content Matter

1.7 Hypotheses Of The Study:
   The following hypotheses were formulated in pursuance of the objectives
   and variables of the study.

1) There will be no significant difference between mean score on
   Achievement test between control and experimental group.

   Gender

2) There will be no significant difference in mean scores of Achievement test
   between boys and girls for experimental group.
3) There will be no significant difference in mean score on Achievement test of control and experimental group for boys.

4) There will be no significant difference in mean score on Achievement test of control and experimental group for girls.

**SES**

5) There will be no significant difference in mean score on Achievement test between student of high SES and low SES for experimental group.

6) There will be no significant difference in mean score on Achievement test between boys and girls of high SES for experimental group.

7) There will be no significant difference in mean score on Achievement test between boys and girls of low SES for experimental group.

8) There will be no significant difference in mean score of boys on Achievement test between high SES and low SES for experimental group.

9) There will be no significant difference in mean score of girls on Achievement test between high SES and low SES for experimental group.

10) There will be no significant difference in mean score on Achievement test of control and experimental group for high SES.

11) There will be no significant difference in mean score on Achievement test of control and experimental group for low SES.

**IQ**

12) There will be no significant difference in mean score on Achievement test between students of high IQ and low IQ experimental group.

13) There will be no significant difference in mean score on Achievement test between boys and girls of high IQ for experimental group.

14) There will be no significant difference in mean score on Achievement test between boys and girls of low IQ for experimental group.

15) There will be no significant difference in mean score of boys on Achievement test between high IQ and low IQ for experimental group.
16) There will be no significant difference in mean score of girls on Achievement test between high IQ and low IQ for experimental group.

17) There will be no significant difference in mean score on Achievement test of control and experimental group for high IQ.

18) There will be no significant difference in mean score on Achievement test of control and experimental group for low IQ.

1.8 Delimitations Of The Studies:

Even with specific objectives of the study, there are some limitations too in every research study. This study has also the limitations which are restricted in a particular way. They are as follows:

1. This study was limited to 9th standard students of secondary schools of Guajarati medium of Anand District of Gujarat State.

2. Anand High School, Anand was selected for implementation of programme for experimental group.

3. Pioneer High School, Anand was selected for implementation of programme for Control group.

4. The present study is delimitated to Social Science textbook of Gujarat State Board School textbook, Gandhinagar, syllabus 2009-10.

5. It is further delimitated to certain chapter namely – mGwU hK, f r = eA n rA j n l t n a mąbxB j is µ ā ā, w a r t l y l d x a h l, mąn v v St l.

6. Dependent variables were Gender, SES and IQ

7. Content matter for the Achievement Test and KELM Programme were restricted.

1.9 Scheme Of Chapterization:

The entire report of the present study is divided into eight chapters. A brief description of the remaining chapters is given here with a view to acquainting the reader with the treatment of the subject under consideration.

The second chapter presents theoretical discussion of Kolb’s experimental leaning model. It presents brief history, definitions and characteristics of Kolb’s
experimental leaning model, Issus of Kolb’s experimental leaning model and model of Kolb’s experimental learning and teaching-learning of experimental leaning.

The third chapter deals with the review of related researches which enable the investigator to have proper perspective. The investigator reviewed the past researches done in the experimental and its related factors.

The fourth chapter describes the planning and procedure of the study. It discusses the procedures involved in the preparation and validation of the tools, sampling techniques, variables and research design of the study. This also includes description of the tools to be used, method of data collection, and methods of data analysis and tabulation of the data.

The fifth chapter deals with construction and standardization of Achievement Test. The process of standardization of achievement test includes manuscript, pre-pilot try-out and pilot try-out.

The sixth chapter contains the process of development of Kolb’s Experimental Leaning Programme.

The seventh chapter contains the detailed analysis and interpretation of the data using T test.

The eighth chapter contains the summary of research work, results, findings, educational implications and recommendation for further study.

At the end of the report, bibliography containing books and references consulted is listed. The appendices include various try-outs involved in construction and standardization of Achievement test and Kolb’s Experimental Leaning programme.