

**Chapter 1 -
Conceptual
Framework
of
the Study**

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Conceptual Framework of the Study

1.1 Introduction

Due to globalization, people and the nations of the world have now become interconnected and interdependent. Various issues like trade and commerce, international peace, terrorism, natural disasters, etc. are impacting people world over. Social science curriculum endeavors to make students aware of all such global issues. The global knowledge economy with the generation of unprecedented volume of data and information make it imperative that school students be equipped to access the storehouse of data available and use it to meet their needs. The efficient handling of this vast information requires us to expand the scope of functional literacy (reading, writing and arithmetic) to include comprehension and analytical skills as well.

As complexity of the world increases, it warrants collective and collaborative actions. Education must prepare individuals to work together and meet challenges. However, the present education system falls short of this new age requirement. A transition is necessary from knowledge transmission to knowledge construction. It will necessitate change in role of the teachers and the students. The Constructivist approach, an emerging teaching-learning philosophy, advocates this concept. As per this philosophy, the teacher becomes a facilitator; a guide and he/she create a learning environment in which the students construct meaning and knowledge. The teaching learning approaches need to help the learners acquire knowledge and skills in an interactive environment while promoting comprehension, creativity, critical thinking and problem-solving abilities.

National Curriculum Framework 2005 observed that Social Science deals with the various issues of the society that include disciplines like geography, history, political science, economics, sociology and anthropology etc. Social Science has a significant role in building a strong, just and peaceful society. Education must help students understand, explore and question the social realities.

1.2 Theories of Learning and their implications

1.2.1 Behaviorism

This theory of learning was founded by John B. Watson who in his classic paper "Psychology as the Behaviorist Views It" (1913) said that any person can be trained to perform any task, irrespective of genetic background, personality traits, through right conditioning. John B. Watson, Ivan Pavlov, B. F. Skinner, Edward Thorndike and

Clark Hull are some of the important theorists who championed behaviorism that was dominant during the middle of the 20th-century.

1.2.2 Humanism

This learning theory of 1960s is based on generation of knowledge, through interpersonal and intrapersonal intelligence of human beings. Here, the learner adapts their prior knowledge to new experience. The educator's role in humanistic learning is to encourage and enable the learner by providing access to suitable resources. Abraham Maslow, Carl Rogers, Marie Montessori, and William Glasser are the notable proponents of humanism.

1.2.3 Constructivism

Constructivism is a relatively new approach in education that postulates human beings are better able to understand the information they construct by themselves. Constructivism transforms classroom into a knowledge-construction site where new knowledge is built by the learners by exploring environment, objects, testing hypotheses, drawing conclusions by using their prior experience and knowledge.

Types of Constructivism

Cognitive Constructivism

Jean Piaget (1896-1980)

Jean Piaget, a student of biology and zoology, understood that survival requires adaptation. According to him, human development is expressed through functions and cognitive structures. Functions are inborn biological processes that are identical for everyone and stay unchanged throughout life. They construct internal cognitive structures that change as the child grows (Vasta et al 1995, Pg. 33). Adaptation refers to the tendency of the organism to fit with its environment for survival. Piaget (1929) stated that children go through four stages of development – Sensori-motor stage, which a child goes through from ages zero to two; pre-operational stage (2 to 7 years old), concrete operational stage (7 to 11 years old), and the formal operational stage (11 years old to adulthood).

Social Constructivism

Lev Vygotsky (1896 – 1934)

Vygotsky is the main proponent of social constructivism. He said that life-long process of development is dependent on social interaction and that social learning leads to

cognitive development. Child encounters the social environment first on an interpersonal level and then internalizes this experience into learning. The important features of constructive learning theory are construction of knowledge, multiple perspective of reality, use of prior experience and knowledge, collaborative work etc.

Constructivism – The Emerging Learning Philosophy

Constructivism philosophy postulates that people understand and retain information for a longer time what they construct by themselves. NCF (2005) recommended constructivist approach of teaching. The origin of constructivism can be traced back to the work of 18th century philosopher, Giambattista Vico, who said that humans can only clearly understand what they construct themselves. Major advocates of constructivism in 20th century include Dewey (1938), Piaget (1929), Bruner (1961), Vygotsky (1978), Fosnot (1996), etc. As per Jha (2012), constructivism focuses on knowledge construction and not on knowledge transmission. When we come across something new, we relate it with our experience. Either we change our past idea or discard the new idea. In the process, we create new knowledge by asking questions, explaining and assessing what we already know (Dwivedi, 2010). According to Yadav et al (2014), there are various constructivist learning models which can be used for teaching of Social Studies. According to them, there are two major learning models, as given below, that can revitalize the Social Studies classrooms.

- Black et al (1995) created a model of constructivism which has the seven steps – observation, contextualization, cognitive apprenticeship, collaboration, interpretation construction, multiple interpretations and multiple manifestations.
- **5Es Learning Model** proposed by Roger Bybee (2009), Principal Researcher of a team of The Biological Science Curriculum Study (BSCS), developed an instructional model for Constructivism in 1997, known as “5Es”. The concept of 5E model is based on the constructivist theory of learning that suggests people construct knowledge and meaning from experiences. In the classroom, constructivism requires educators to engage, build enquiry, exploration and assessment of their instructional approach. The 5E includes five stages: Engage, Explore, Explain, Elaborate and Evaluate. The 5E method is an example of enquiry-based learning, in which students ask questions, decide what information increases their understanding and then carry out self-assessment.

In a constructivist classroom, learning process shifts from being teacher-centric to students-centric. Teacher becomes a facilitator, coach, moderator and a guide. Teacher initiates the discussion by introducing a concept which is worked upon by the students, mostly working in a collaborative manner in a group and constructing further knowledge based on their previous knowledge and experience that stays on with the students for a much longer time. Learning improves when the ‘learner’ is given central place in the instructional process (Riding et al, 1995; Riding et al, 1993). Common methods used in constructivist teaching are cooperative learning, collaborative learning, problem-based learning, inquiry-based learning, field visits, self and peer assessment, etc. Lemmer (1998) states that effective teaching and learning depends largely on the establishment of a sound relationship between the teacher and the learner in the classroom. Table 1.1 below gives a comparison of Traditional Classroom-vs-Constructivist Classroom:

Table 1.1

Comparison of Traditional Classroom-vs-Constructivist Classroom

Traditional Classroom	Constructivist Classroom
<ul style="list-style-type: none"> • Knowledge exists outside the students • Teacher centric • Passive Learners • Individual activities competitive • Search for correct answers • Memorization of facts • Reliance on textbooks • Pen and paper test • Directive and authoritative • Activity wise inert 	<ul style="list-style-type: none"> • Knowledge exists within the students • Student centric • Active learners • Interactive activities cooperative • No right no wrong answers • Conceptualization of facts • Construction of meanings by students • Alternative assessment (students work, observe, group discussions) • Inductive, Meditative and rooted in negotiation • Dynamic, ever changing based on experiences and progression of discussions

Schools must allow students to question, enquire debate, reflect and create new ideas and concepts. Research work of Dewey and Vygotsky blended with Piaget’s work in developmental psychology formed the base of constructivism. Students bring prior knowledge into a learning situation in which they analyze and re-evaluate their understanding of it. This process of interpretation, articulation and re-evaluation goes on till they fully comprehend the subject.

Teaching needs to help the students acquire knowledge and skills in an interactive environment. Spirit of inquiry and creativity amongst the students and teachers needs to be promoted. Teachers should function as facilitator and help students to develop

their understanding. He should guide student enquiries and promote newer thinking, encouraging multiple interpretations.

1.3 The Changing Context of Education in India – Recommendations of Various Education Commissions Post-independence

To create a just and egalitarian society, Preamble of Constitution of India emphasized liberty, religion, education, equality, justice, and fraternity in the face of huge challenges like diverse castes, religions, languages, cultures and interest groups. In this backdrop, India decided to impart education and values to its children to make them fit for democratic functioning of the country. Post-independence, successive governments have endeavored to spread education to a vast majority of students covering all strata. While statistically, the numbers have increased, quality has suffered. Over time, various Education Commissions set up by Government of India have studied educational issues and made several recommendations. Some of the major ones are as under:

The University Education Commission (1948-49). Post-independence, University Education Commission, 1948, was set up under the Chairmanship of Dr. S. Radhakrishnan to study the Indian University education and suggest improvements. It recommended that education should acquaint students with the social philosophy which will govern all social, educational and economic institutions. It also recommended providing training for promoting democracy, appreciating cultural heritages, developing democratic citizenship and leadership. This had significant implications for school education also.

National Education Commission or Kothari Commission (1964-66) was set up to examine all aspects of the educational sector in India with a view to evolve a general pattern of education, to provide guidelines and policies for the development of education. The Commission felt the need for educational revolution – an internal transformation to relate education to life and aspiration of the nation. It recommended strengthening of social and national integration, cultivation of social, moral and spiritual values, as the goals of education. It put forward 22 major recommendations to enhance school education.

National Policy on Education (1968) emphasized on compulsory education for all children up to the age of 14 as specified by the Constitution of India.

National Policy on Education (1986) recommended that education shall be based on a common core comprising history of India's freedom movement, constitutional

obligations, nurturing of national identity along with some flexible components. These will promote India's common cultural heritage, egalitarianism, democracy, secularism, removal of social barriers etc. NEP 1986 also promoted Adult Education, Open University system etc.

National Policy on Education (1992): subsequent to adoption of NPE 1986 in the Parliament, two committees were formed under the Chairmanship of Acharya Ramamurti (1990) and Shri N. Janardhana Reddy (1991) to review it and recommend necessary modifications. Both broadly endorsed NPE 1986 while making a few recommendations. It included introduction of Common Entrance Examination on All India basis, for all professional and technical courses.

National Curriculum Framework (NCF) 2005 provided detailed scheme for social sciences that encompasses diverse issues of society and contents from history, geography, political science, economics, sociology, anthropology and other subjects. They felt, the curriculum needs to deal with contemporary issues such as human rights, inclusiveness, environmental pollution, population issues, national integration, poverty, illiteracy, child and bonded labor, caste equity, etc. Moreover, the curriculum needs to create standards to meet the global challenges.

Draft National Educational Policy (2019): It dealt with revision and revamping of the educational structure, regulations and governance in line with aspirational goals of 21st century education while remaining consistent with India's traditions and value system. It envisions providing high quality education to all to transform our nation into an equitable and vibrant knowledge society.

1.4 School Education System in India

Education is a social process. The transformation of Indian education system from the ancient Gurukul system to today's virtual learning system is a reflection of the changing social context. India did not have an organized education system for a long time. The organized system of education is a British legacy that started in the middle of nineteenth century. Post-independence, successive governments at both centre and states have taken several initiatives to spread education across the country.

Educational Statistics at a Glance, Government of India, MHRD 2018 Report gives the following data:

- Total number of recognized institutes as in 2015-16

Primary	:	8,40,546
Upper Primary	:	4,29,624
Secondary	:	1,39,539
Senior Secondary:		<u>1,12,637</u>
Total	:	<u><u>15,22,346</u></u>

Funding

Govt. Institutions :		11,02,783
Govt. Aided	:	83,787
Pvt. Unaided	:	<u>3,35,776</u>
Total	:	<u><u>15,22,346</u></u>

- Total number of students: 33,64,83,000 including 17,43,34,000 boys and 16,21,49,000 girls.

Of the above, 40% are studying Arts/Humanities/Social Sciences.

- Pupil teacher ratio for primary, upper primary, secondary and senior secondary stands at 23,17,27 and 37 respectively.

Though above statistics portray a reasonably decent picture in terms of enrolment, it does not speak about the poor condition as far as quality of learning is concerned. Annual Status of Education Report (ASER, 2018) provides the following information:

- Number of Standard V students who can at least read at standard II level and do basic arithmetic operation increased from 46.8% in 2012 to 50.3% in 2018 and 24.8% in 2012 to 27.8% in 2018 respectively.
- Number of Standard VIII students who can correctly solve numerical division remains stagnant from 2014 to 2018 at around 44%.
- 1 out of 4 children leaving Standard VIII without having basic reading skills.
- School dropouts have been falling in different age groups. In the age group of 11 to 14 years, dropout rates for boys have reduced from 5.5% in 2008 to 3.8% in 2018. For girls, the rate has correspondingly reduced from 7.2% to 4.1%. In the age group of 15 – 16 years, dropout rate for boys reduced for 17.3% in 2008 to 12.6% in 2018. For girls, in this age group, dropout rates reduced from 20.1% in 2008 to 13.5% in 2018.

It is evident from the above, while accessibility to education has gone up, quality of education and learning needs significant improvement. Focus is required on building foundational skills without which students will not be able to benefit from additional years in school. Further, there are areas where we need to focus like our school systems are rigid and does not encourage children to link knowledge with their lives, does not encourage creative thinking and insights. It is essential to have an education system that helps all students, though their intelligence, interest, competence and natural abilities may vary significantly. It warrants a very versatile and flexible learning process that addresses the needs of all types of learners.

1.5 Evolution of Social Science as a Subject

In 1992, the Board of Directors of National Council for the Social Studies, the primary member organization for Social Studies education defined Social Studies as the integrated study of the social sciences and humanities to promote civic competence, help students to make rational decisions as citizens in a culturally diverse, democratic and a connected world. Social Science is the study of the society we live in and the ways we relate to each other. It is an umbrella Science that encompasses subjects like Geography, History, Political Science, Economics, Sociology, etc. (Karaduman et al, 2007 & Barr et al, 1978).

Human civilization has come a long way through the Hunting Age, Nomadic Age, Stone Age, Iron Age, River Valley Civilizations and Medieval Age to today's modern time. As human beings stepped on this earth and established family and society, Social Science started evolving as a subject to deal with the ever-changing environment. The evolution and growth of Social Science as a subject has been shaped by modernization, industrialization, urbanization, scientific advancements, two World Wars and many other happenings in this world. Misuse/abuse of Science, Economic Depression of 1930 to 1940 created an element of insecurity, misery, suspicion and distrust amongst the people of the world. In the Indian context, the 200-year British Colonial rule, Sepoy Mutiny, Quit India Movement, Partition of India, communal riots, violence etc. made huge impact on Indian people and society.

Social Science deals with the study of people and their relationship with one another in the context of socio-political-cultural-economic environment. It acclimatizes the child to the environmental setting of family, society, country and finally, the world.

Realizing the criticality of Social Science in developing healthy social and quality individuals to make this world a better place to live in, this subject was included in the school curriculum of most of the countries including India since 20th century post two World Wars in the name of ‘Social Studies’ or ‘Social Science’. This subject is continually evolving to address newer challenges of the world.

In this thesis, the terminologies, “Social Studies” and “Social Science” have been used interchangeably.

1.6 Objectives of teaching Social Science in schools at the Secondary level

Social Science is a compulsory subject up to secondary levels in all schools irrespective of the Board they are affiliated. Social Science is taught in schools with a view to develop analytical and conceptual skills in students to enable them to become proficient in social understanding, civic competence, critical thinking, integrating ideas and inculcating basic human values.

Some of the major objectives identified by CBSE for Social Science (Code No. 087/2018-19) curriculum are:

- To understand the processes of change and development through which human society has evolved.
- To understand contemporary India with its historical perspective of the goals and policies of national development and its connections to world development.
- To know about India’s freedom struggle.
- To understand the values enshrined in the Indian Constitution.
- To understand and appreciate the diversity of the country with its underlying unity.
- To understand the issues and challenges of contemporary India – environmental, economic and social, as part of the development process.
- To help pupils acquire knowledge, skills and understanding to face the challenges of contemporary society as individuals and groups.
- To develop scientific temperament by promoting spirit of enquiry and following a rational and objective approach in analyzing and evaluating data, views and interpretations.
- To develop academic and social skills e.g. critical thinking, effective communication – both visual and verbal, taking initiative and providing leadership in solving other’s problems.
- To develop qualities clustered around the personal, social, moral, national and spiritual values that make a person humane and socially effective.

1.7 Recommendations for a Curriculum Framework for Social Science

The Central Board of Secondary Education (CBSE) was set up in 1962 to bring in academic excellence through psychological, pedagogical and social principles, innovations in teaching-learning methodologies, reforms in examinations and evaluation practices, skill development and continuous up-gradation of pedagogical skills of the teachers and administrators by conducting training, workshops etc.

As per Position Paper (1.5), (2006) National Focus Group on Teaching of Social Sciences, 1975 curriculum, NCERT prepared three separate textbooks (for history, geography and civics) for Class VI to X. However, for practical purposes, the three subjects were combined under one paper called Social Sciences. During curriculum review in 1988, there were no major changes in the syllabi for the upper primary stage. At the secondary stage, it had four subjects (including Economics).

The National Focus Group (NFG, 2006) made the following recommendations for the effective teaching of Social Science:

i) Content Load:

NFG endorsed the Yash Pal Committee (1993) recommendations to minimize emphasis on retention of information without comprehension. It further suggested giving focus on concepts and the ability to analyze socio-political realities. Accordingly, textbooks should stimulate child's thought process and creativity.

ii) Inter-relationships among disciplines:

The constituent subjects of Social Science, e.g. history, geography, political science and economics have distinct boundaries which are to be removed and a plurality of approaches needs to be applied to understand a specific issue.

1.8 Challenges for Teaching Social Science

The legacy of Social Science education has been simple transmission of information that led to use of rote memory without much comprehension and higher mental operation e.g. problem solving, creative thinking, etc. Even today, the predominant perceptions of parents, students and others have been that Social Science is a non-utility, non-core and non-critical subject and has much less importance compared to the natural sciences. To improve such perceptions, the educationists, social scientists, policy makers must formulate a multi-prong strategy. Firstly, parents and students are to be given the correct picture of the job opportunities. Jobs of civil service,

journalism, political analyst, legislative assistant, public relation officers, market research analyst and many others are available. Positions are further evolving for students having Political Science/Social Science major. Secondly, teaching of Social Science must aim at developing clear understanding of social issues, global issues, and larger perspectives about important disciplinary and inter-disciplinary issues to make the study interesting.

1.9 Vadodara City, Gujarat – Scenario of School Education

Vadodara is the third most populated city in Gujarat after Ahmedabad and Surat with a population of over 1.5 million. The city is situated on the banks of the river Vishwamitri and is a city of banyan trees. From banyan leaf or Vadpatra, the city derived its present name, Baroda or Vadodara. The city has a rich heritage with a history of over 2000 years. Mughal rule over this city ended in 1732. Except for a short time, Vadodara continued to be under the Gaekwads from 1734 to 1949. The great period in the history of Vadodara started from the time of Maharaj Sayajirao III in 1875. It is marked with great progress and achievement in all fields including education.

Schools of Vadodara are largely affiliated to the Gujarat Secondary and Higher Secondary Education Board (GSHSEB). Vadodara has quite a few Government schools where the medium of instruction is Gujarati. Private schools are mostly self-financed and are affiliated to the Central Board of Secondary Education (CBSE), Council for the Indian Social Certificate Examination (CISCE) as also International Baccalaureate (IB) Board where the medium of instruction is English.

1.10 Scenario of Vadodara City with respect to Teaching of Social Science

Scenario regarding Social Science is no different in Vadodara. Personal experience of this Researcher shows that over the years, more than 80-85% students passing out of Secondary School examination opt for general science and commerce streams and only around 10-15% students opt for Humanities, Political Science subjects at the Higher Secondary level. Number of Political Science students are so small that even today, no Evaluation Centre is organized by CBSE in Vadodara for assessing the answer sheets of Higher Secondary Political Science subject.

Besides lack of job opportunities, Social Science teaching is still largely prescriptive and depends on rote memorization. It is a huge challenge for the Social Science teachers to make it a sought-after subject.

1.11 Factors Impacting Teaching-Learning Process

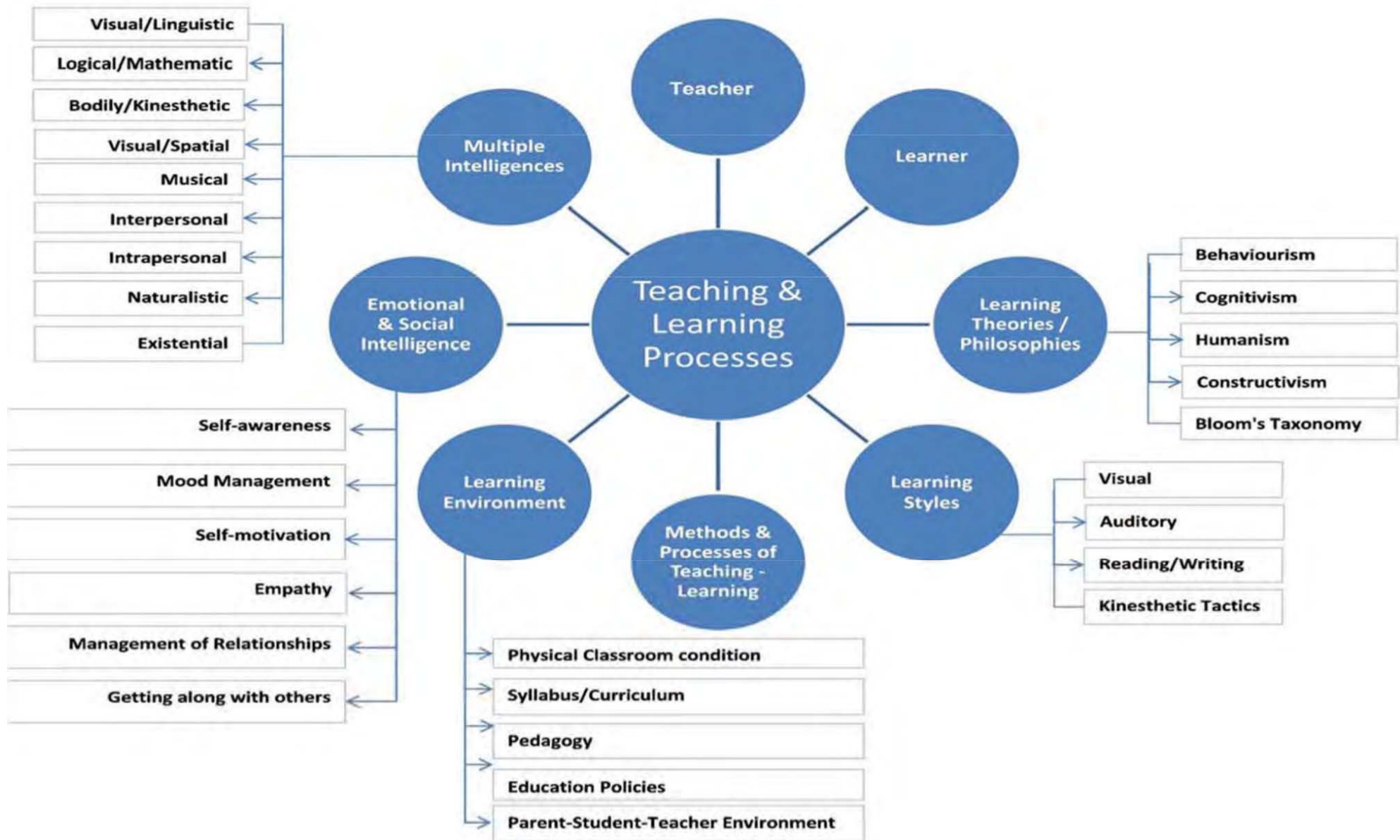
The educational scenario in reveals that traditional methods of teaching are still prevalent at the school level. Steffani et al (2016) identified the drivers of the teaching- learning process as teacher, student, topic and institution. Learning and teaching book of Bharathidasan University, Centre for Distance Education 2015-16 identified the factors critical to learning processes as individual psychological differences of learners, teacher's enthusiasm in classroom and other factors. Kemala (2016) identified factors that impact teaching-learning process as roles of the learners, teacher, environment etc.

Various reports have confirmed poor learning outcomes and the need for revisiting our instructional processes. This necessitates understanding the various factors impacting teaching-learning process that influence and determine the effectiveness of learning. Some of the major ones are as under.

- Learner (student)
- Educator (teacher)
- Learning Theories/Philosophies
- Learning Styles
- Learning Environment
- Emotional and Social Intelligence
- Multiple Intelligence
- Methods/Activities of Teaching-Learning

Many of the above have overlaps and are complementary in nature (refer Figure 1.1 given hereinafter).

Figure 1.1: Factors Impacting Teaching-Learning Process



1.12 Need and Significance of the Study

Social Science is a compulsory subject in both the Primary and Secondary stages of school education. It is included keeping in mind the significant role it plays in helping learners in understanding and developing a broad perspective of the environment he/she lives in. This plays a crucial role in helping students to grow as well informed and responsible future citizens who would be able to contribute meaningfully to the nation and the world at large (CBSE, 2019-2020).

Social Science is akin to an umbrella that has underneath quite a few other subjects like history, geography, political science, economics, etc. Goal of teaching Social Science is to develop children as worthy future citizen of the country and the society they live in. Social Science enables the learners to participate and contribute meaningfully to the society as well as create healthy relationships with one another. It helps them to understand the socio-political-economic-cultural fabric of the environment Social Science is taught in schools with a view to develop analytical and conceptual skills in students to enable them to become proficient in social understanding, civic competence, critical thinking, integrating ideas and inculcating basic human values.

Unfortunately, Social Science education has remained largely teacher-centric and simple transmission of information by the teachers and emphasis on rote memorization. Students, parents and others perceive it to be a non-core, non-utility subject that offers limited job opportunities. All these make Social Science the least interesting subject. Despite its importance, the subject is languishing. All out efforts are needed to create a respectable place for Social Science not only in the curriculum, but also in the education system and society.

Constructivism is an emerging learning philosophy that postulates that learners can learn better by constructing meaning by themselves based on their previous knowledge and experience. Here, the focus of the learning process shifts from being teacher-centric to student-centric. Teacher becomes a facilitator, moderator, collaborator and guide. Learning and acquiring new knowledge through constructivism is more valuable than that comes through traditional teacher-centric method. Further, the retention of knowledge tends to be much more. The constructivist theory encourages students to learn through practicing, problem solving and decision-making activities. Construction of meaning, self-reflections,

group learning can make the subject interesting. To establish Social Science a subject of choice and to realize its full potential, constructivist teaching-learning method can take a lead role. It has a lot of scope for developing critical thinking ability of the learners.

As a teacher of Social Science for 30 years, the Researcher thought that implementation of constructivist approach in Social Science at school level would bring positive impact on the teaching-learning process. In view of this, the present study was undertaken in expectation that it would improve Social Science teaching-learning process through improved participation, comprehension, thinking ability, analytical ability and academic performance of the students and it would make the subject interesting to the students.

1.13 Research Questions

The following research questions were designed for the Study:

1. Whether Constructivist methodologies of teaching Social Science can be designed that promote interest and knowledge retention in students?
2. How can a Constructivist Classroom be created for Social Science of CBSE English medium Standard IX students effectively that enhances academic performance?
3. What are the reactions of the students towards such methodologies?

In order to find answers to these research questions, the researcher undertook the Study titled, **‘A Study of the Effectiveness of Constructivist Approach in the Teaching of Social Science at CBSE English Medium Secondary School Level.’**

1.14 Objectives of the Study

- 1) To design Lessons based on Constructivist approach (5E Model) in Social Science for Standard IX CBSE English medium students.
- 2) To implement the Lessons based on Constructivist approach in Social Science for Standard IX CBSE English Medium students.
- 3) To study the effectiveness of the approach:
 - by comparing Mean Achievement Scores of Experimental and Control groups of students in Social Science in Post Test 1
 - by comparing Mean Achievement Scores of Experimental and Control groups of students in Social Science in Post Test 2
 - by comparing Mean Achievement Scores of Experimental and Control

groups of students in Social Science in Post Test 3

- by comparing Mean Achievement Scores of Experimental and Control groups in Comprehensive Post-Test.
- 4) To study the effectiveness of the Constructivist approach in terms of the reactions of students.

1.15 Hypotheses

- (H₀₁): There will be no significant difference in the Mean Achievement Scores of the Experimental and Control Group students in Social Science in Post-Test 1.
- (H₀₂): There will be no significant difference in the Mean Achievement Scores of the Experimental and Control Group students in Social Science in Post-Test 2.
- (H₀₃): There will be no significant difference in the Mean Achievement Scores of the Experimental and Control Group students in Social Science in Post-Test 3.
- (H₀₄): There will be no significant difference in the Mean Achievement Scores of the Experimental and Control Group students in Social Science in Comprehensive Post-Test.

1.16 Explanation of Terms

- **Constructivist Approach (5E Model)**

It refers to the student-centric teaching-learning process wherein students learn by reflecting on their previous knowledge and experience leading to construction of new understanding. 5E entails Engage, Explore, Explain, Elaborate and Evaluate.

- **Lesson Plan (LP)**

Lesson Plan (LP) in the present Study, refers to the instruction designed and developed by the researcher based on constructivist principles for teaching Social Science for Std. IX, CBSE, English Medium students. The Lessons have been developed based on the concept of 5E (i.e. Engage, Explore, Explain, Elaborate & Evaluate) proposed by Bybee (2009).

- **Traditional Approach**

It refers to conventional teacher-centric teaching-learning process where teacher teaches the class and has the total control of the teaching as well as the class. Students are passive recipient of knowledge.

- **Experimental Group**

It refers to the group of students who were taught through Constructivist approach.

- **Control Group**

It refers to the group of students who were taught through Traditional approach by another teacher.

1.17 Operational Definition of Terms

Effectiveness, in this study, refers to:

- Increase in the Mean Achievement Scores of the Experimental Group students when compared to those of the Control Group students;
- Positive reactions of the Experimental Group students towards the effectiveness of teaching conducted through Lesson Plans (LP) developed based on Constructivist teaching approach.

1.18 Delimitation of the Study

The present study is delimited to:

- The Standard IX CBSE Social Science students with English as medium of instruction in Vadodara City, of academic year 2016-17.
- Ten (10) Lesson Plans comprising three (3) Lessons of Social Science content of Standard IX of CBSE curricula.

1.19 Organization of the Thesis

First Chapter deals with the Conceptual Framework of the Study that includes the theories of learning, types of constructivism, changing context of education in India, evolution, objectives and challenges of teaching Social Science in schools, Social Science teaching in Vadodara city, factors impacting teaching-learning process, need & significance of the study, research questions, title of the study, research objectives, hypotheses, explanation of terms, operational definition of terms and delimitation of the study.

Second Chapter brings out the Review of Related Literature under the following heads:

1. Constructivism and Constructivist Teaching
2. Teaching-learning Principles/Methods
3. Learning Styles and Study Habits
4. Emotional and Social Intelligence
5. Multiple Intelligence
6. Technology in Constructivist Teaching

7. Constructivist Teaching of Various Subjects
8. 5E Model of Learning

This chapter also provides the Rationale of the Study.

Third Chapter gives the Plan and Procedure followed for carrying out the research study. It includes Research Design, Variables of the Study, Phases Adopted for the Study, Population, Samples & Sampling, Tools, Administration of Pre-test, Post-tests 1, 2, 3 and Comprehensive Post-test, Data Collection – Tools and Techniques, Consolidation of Achievement Test Scores and Reaction Feedbacks for carrying out the Data Analysis.

Fourth Chapter gives an account of the 5E Model of teaching approach, development of 10 Lesson Plans (LP) covering 3 major topics of Social Science of IX Standard CBSE English Medium Curriculum. It also gives the implementation of these Lesson Plans (LP).

Fifth Chapter provides the Data Analysis and Interpretation of Data comprising descriptive and inferential statistics of the mean achievement scores obtained by the Experimental and Control Groups in Pre-Test, Post-Test 1, Post-Test 2, Post-Test 3 and Comprehensive Post-Test. This chapter also gives the analysis of students' reaction feedbacks on the effectiveness of Constructivist teaching and qualitative analysis. This chapter finally covers the major findings, discussion and suggestions to various stakeholders.

Sixth Chapter provides the Research Summary.

At the end, the References and Appendices are enclosed.