

# Chapter 1

## Conceptual Framework

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## CONCEPTUAL FRAMEWORK

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### 1. Introduction

Worldwide interdependence and globalization are major forces in contemporary life. They are already at work and will leave a deep imprint on the twenty-first century (UNESCO, 1997). In 21<sup>st</sup> century, a globe is becoming a small village, wherein, the global citizens share culture, ideals, belief, values, doctrines and economy through highly networked communication technologies and globally explores the resources, advanced technologies and global trades to accelerate the economy, universalistic development, to safeguard diversity, transmit culture and to conserve the ecology. These changes in the Global era are termed as globalization. However, the process of globalization is being driven by '*Economic Pull*' (Ellyard, 1990). As a consequence, the process of globalization remained lopsided. The universalistic nature of development as a collective vision of human societies is almost lost (Roy Singh, 1991). Such changes at global level are widening the socio-economical gaps and causing many global challenges, such as, value dilemma, ecological, health and hygiene, peace, educational and economical. To deal with such global challenges, UNESCO (2007) has emphasized eight goals that each developing nation has to achieve. The goals are known as Millennium Developmental Goals (MDGs).

Goal 1: Eradicate extreme poverty and hunger

Goal 2: Achieve universal primary education

Goal 3: Promote gender equality and empower women

Goal 4: Reduce child mortality

Goal 5: Maternal health

Goal 6: Combat HIV/AIDS, Malaria and other diseases

Goal 7: Ensure environmental sustainability

Goal 8: Global Partnership

(United Nations Development Programme, 1990)

UNESCO (2010) has emphasised, "Education is a major catalyst for human development and rapid advances in education can help to achieve all of the MDGs.

Education has potential to achieve these goals by realizing the sensitivity towards culture, environment, economy and changing needs of the global society.” Further Nivedita (2010) elaborated another aspect of 21<sup>st</sup> century and needs arising due to it as, “In this increasingly complex world, where differences need respects, mixture of culture needs understanding and acceptance, learning to live together needs international cooperation and exchange, the world should be seen as an educational laboratory that analyze the factors explaining educational needs, and the learning process will be enhanced.” Thus, education should be seen as a mean of shaping the socio-economic and cultural force and determining the direction of growth (Roy Singh, 1991). Further, it suggests that the curriculum inputs of education, should be reframed in the light of prevailing and future conditions in 21<sup>st</sup> century and instructional strategies should help in achieving sustainability and MDGs of the 21<sup>st</sup> century. As outcome of such reforms, skills should be developed that are essential to meet the needs and to cope up with challenges of 21<sup>st</sup> century.

### **1.1. 21<sup>st</sup> Century Challenges and Education**

21<sup>st</sup> century is highly influenced with globalization, which has created many changes at global level and at local level. These changes can be seen in a globalization of economic systems, in the rapid development of science and technology, in the age structure, mobility of populations and in the emergence of an information-based & knowledge-based society. The world is also experiencing major changes in patterns of work and unemployment, a growing ecological crisis, and tensions between social groups based on culture, ethnicity, gender roles, religion and income (Confintea, The Hamburg declaration, 1997). The ongoing changes have swiped the cocooned societies and their individual to the future state of affairs without choice or control of its destiny (Roy Singh, 1991), and, as a result of such changes, today societies and their individuals are facing & will face many challenges. Rychen & Salganik (2003) have comprehensively illustrated the challenges, “Technology is changing rapidly and continuously, and learning to deal with it requires not just one-off mastery of processes but also adaptability. Societies are becoming more diverse and compartmentalized, with interpersonal relationships therefore requiring more contact with those who are different from oneself. Globalization is creating new forms of interdependence, and actions are subject both to influences (such as economic competition) and consequences (such as pollution) that stretch well beyond an

individual's local or national community.” Further, Rychen & Salganik (2003), have defined 21<sup>st</sup> century needs of society and their individuals i.e. the need to realize one's identity and set goals in complex world, the need to exercise rights and take responsibility, the need to understand one's environment and its functioning, the need to deal with diversity in pluralistic societies, the need to keep up to date with technologies, the need to adapt tools to own purposes, the need to conduct active dialogue with the world, the importance of empathy, and the importance of social capital.

The contemporary society and their individuals are confronted to collaborate with a global society and to meet the challenges, need to be aware of global and local nature of societal issues, need to appreciate interconnectedness and interdependence of people, need to preserve and transmit own culture, need to respect and protect cultural diversity, need to understand the nature of global and local economic integration, need to deal with the rapidly changing technologies, need to fight for social justice for all, and need to protect planet earth (adapted from Zhao, 2010).

### **1.1.1. Educational Needs of the Students in 21<sup>st</sup> Century**

From the above discussion educational aims should be framed that enable students

- a. To develop Discipline, Dedication, Decorum and Determination
- b. To conserve & transmit indigenous values, culture and skills along with shared values
- c. To respect & protect cultural diversity
- d. To inculcate Constitutional Values & Citizenship Skills
- e. To realize self in interconnected & interdependent global society
- f. To develop global perspective by acting locally

### **1.1.2. Educational Aim in 21<sup>st</sup> Century**

Education is in its profoundest essence an activity of a human spirit which can only be realized in the society of today and future (Roy Singh, 1991). Education acts as a potent tool in integration of knowledge, values, skills and culture, since it aims at all round development of youth. Education is also a means through which an individual can cope up with the challenges arouse due to globalization. By taking this view, UNESCO (2001) has emphasised upon education and framed educational agenda that includes; Climate Change Education, Education for Sustainable Development, Human Rights Education, Gender and Education, Education and the MDGs, Education for All

(EFA), Right to Education (RTE) and Information and Communication Technologies (ICT) in Education. Further, UNESCO Bureau of Strategic Planning (2003) has given special focus upon peace and human development in an era of globalization through education, sciences, culture & communication and have set three educational criteria around: Developing and promoting universal principles and norms based on shared values in order to meet emerging challenges in education, science, culture and communication and to protect and strengthen the ‘common public good’; promoting pluralism, through recognition and safeguarding of diversity together with the observance of human rights; and promoting empowerment and participation in the emerging knowledge society through equitable access, capacity-building and sharing of knowledge.

To meet the above educational aims UNESCO (2004) has emphasized upon four pillars of education for 21<sup>st</sup> century i.e.

**Learning to Know:** By combining a sufficiently broad general knowledge of world around them with the opportunity to work in-depth on a small number of subjects. This also means learning to learn, so as to benefit from the opportunities, education provides throughout life.

**Learning to Do:** In order to acquire not only an occupational skill but also the competence to deal with many situations and work in teams. It also means learning to do in the context of young peoples’ various social and work experiences which may be informal as a result of the local or national context, or formal involving courses, alternating study and work.

**Learning to Be:** To develop one’s personality and be able to act with ever greater autonomy, judgement and personal responsibility. In that connection, education must not disregard any aspect of a person’s potential: memory, reasoning, aesthetic sense, physical capacities and communication skills.

**Learning to Live Together:** By developing an understanding of other people and an appreciation of interdependence – carrying out joint projects and learning to manage conflicts – in a spirit of respect for the values of pluralism, mutual understanding and peace.

Among these four pillars first three are essential for sound development of individual and society whereas learning to live together the fourth pillar is more of global nature

i.e. co-existence in the global age which is central to UNESCO's mission for peace and human development (Nivedita, 2010).

Sternberg & Subotnik (2007) described successful intelligence in this global age are those who have creative skills to produce a vision for how they intend to make the world a better place for everyone, analytical intellectual skill to assess their vision and those of other, practical intellectual skill to carry out their vision and persuade people of its value, and wisdom to ensure that their vision is not a selfish one.

The advancement in Information and Communication Technology (ICT) has brought a worldwide revolution. The world has become a small village through media, telecommunication and network technologies. In this wave of revolution, India has contributed significantly and gives rise to information explosion which demands knowledge and skills in using various media, networking technologies, and various tools for communication in interconnected worldwide network. Info-savvy skills make an individual capable to manage, to find, to identify and to use the relevant information from the ocean of information by asking, accessing, analyzing, applying and assessing the information. The framework for 21<sup>st</sup> century learning (2007) has also emphasized upon ICT literacy and media literacy.

Roy Singh (1991) envisioned the process of education as unified and multi-dimensional, which is centred on the human being. Along one dimension is the fundamental need for a balanced and all-round development of the human personality - intellectual, aesthetic, emotional, attitudinal and physical. Development along this dimension interfaces to levels of ontological significance. One is the level at which the human powers of the mind are realized-intellection, empathy, capabilities, skills of action. The other is the "internal" universe of man's being where the moral sense and valuing and the spiritual sense are brought to fruition. The educational environment fosters personal growth, experience of self-discovery and inner freedom. Intellectual discipline, sensitivity to beauty and enrichment of personal relationships are highly valued. The second dimension of a unified view is defined by man's place in the world in which he lives and has his being - the world of nature and of human society. The levels of significance in this dimension are twofold. At one level, man's relationship is one of knowledge and understanding. At another level, it deepens to engage a full range of human capacities. Thus knowledge and understanding of nature deepen to a sense of harmony with nature; an understanding of "global village"

transmutes itself to a perception of oneness and interdependence. The study of human society is no longer limited to the study of objects but becomes a commitment to societal development, social responsibility, cultural participation and renewal, and human rights. The educational and societal goals merge in a vision of the learning society which serves the enrichment and fulfillment of all human beings in the fullness of their diversities, complexity and profundity.

Education should not be seen as isolation, it better nurture in the economical, political, societal and cultural milieu of an individual and society. Education should be based on four pillars to take up the challenges of today and of future in the 21<sup>st</sup> century. Education should impart knowledge of world around us, tools of communication, social structure, political structure, social cohesiveness, economy, technologies and their wise use; i.e. Learning to Know. Education should develop a vision for future and make an individual responsible, hold on own judgement, act autonomous, and at the same time it should provide means of communication; i.e. Learning to Be. Education should develop an understanding of other people/pluralistic society and an appreciation of interdependence, learning to manage conflicts – in a spirit of respect, of pluralism, mutual understanding and peace by providing knowledge and practice of it; i.e. Learning to Live together. Education should prepare compatible individuals and develop skills through which individuals can deal with many situations i.e. Learning to Do.

### **1.1.3. Challenges faced in Determining Educational Aims**

21<sup>st</sup> century challenges has inflicted many challenges also on students of the fast changing global society in terms of learning various subjects, busy school curriculum, adjustment, creativity and health. Further students' aspiration for high achievement also emphasized, which has caved between students profile and parents expectation. Purohit (2015) identified challenges faced by students as follows

- a. Finding leisure time out of the tight schedule of school and private tuition.
- b. Learning school subjects, such as, Social-Science, Mathematics and Science
- c. Wholistic Adjustment (Home, School, Social, Emotional and Health)
- d. Parental Pressure for High Achievement
- e. Gaps between parental expectation and students profile
- f. Underestimation of Abilities of Students
- g. Aimless Social Networking

- h. Digital Age
- i. Value Dilemma
- j. Devoid of the Beauty of Nature
- k. Child Rights not fully observed
- l. Absence of Creativity Culture
- m. Career Choice

## 1.2. Skills for 21<sup>st</sup> Century

Skills are cluster of behaviours which express ease and precision in action. Skill makes an individual able, efficient and productive to deal with the challenges and their consequent situations. The elite institutions have comprehensively defined skills as per their own perceptive and as per their vision. All of them are striving to common outcome i.e. an individual can live optimally by meeting the challenges in his/her life space region.

UNICEF (1997) shares the concern that, what does it takes to thrive in a world with HIV and AIDS, conflict and violence, gender and ethnic discrimination? The challenges children and young people regularly facing are many and require more than even the best numeracy and literacy skills. That is why the 164 nations committed to Education for All and have included "life skills" as a basic learning need for all young people. World Health Organization (WHO, 1997) has defined life skills as psychosocial and interpersonal skills. The skills were basically classified into three main skills: first is Communication and Interpersonal Skills that comprise of Interpersonal communication skills, Negotiation/refusal skills, Empathy, Cooperation and Teamwork, and Advocacy Skills; second is Decision-Making and Critical Thinking Skills that comprise of Decision making, problem solving skills and Critical thinking skills; and third is Coping and Self-Management Skills that focus on increasing internal locus of control, Skills for managing feelings and Skills for managing stress.

According to Framework for 21<sup>st</sup> Century Learning (2007), globalization and the issues emerging out of it have placed responsibility on education to integrate skills with the interdisciplinary content having inputs, such as, global awareness, civic literacy, health literacy and environmental literacy. The framework for 21<sup>st</sup> Century learning (2007) emphasizes upon three main skills: First, Learning and Innovation



Skills that comprise of Critical thinking and Problem Solving, Creativity and Innovation, Communication and Collaboration. Second, Media and Technology Skills that comprise of Information Literacy, Media Literacy, ICT (Information, Communications and Technology) Literacy. And third, Life and Career Skills that comprise of Flexibility and Adaptability, Initiative and Self-Direction, Social and Cross-Cultural Skills, Productivity and Accountability, Leadership and Responsibility.

Further, Sternberg & Subotnik (2007) defines learners' output in other 3 R's. Here, the R's stand for *Reasoning* which include analytical, critical thinking, and problem solving skills, *Resilience* which encompasses life skills such as flexibility, adaptability, and self-reliance, and *Responsibility* which Sternberg links to wisdom, which he defines as "the application of intelligence, creativity, and knowledge for a common good."

de Jouvenel (1967), makes the case that, "If society tends on the whole to conserve the present state of affairs, our present knowledge and skills has a high chance of being valid in the future. On the other hand, the future validity of our knowledge and skills becomes increasingly doubtful as the mood of society inclines towards change, and the changes promise to be more rapid." With the change in the society, societal context will also change and to cope up with these changes, an individual requires transformation with respect to the new context.

Thus, Forecasting and defining specific skills in 21<sup>st</sup> century will be quite difficult as it changes rapidly as we have already entered in second decade of 21<sup>st</sup> century and still long run to go and during this time challenges and hence need will emerge. Thus the defined skills should address the occurred challenges as well as it should also respond to the new changes.

Life skills are mainly psychological and interpersonal skills for the development of self. As 21<sup>st</sup> century is highly influenced with the development in ICT, skills related to ICT are essential. Framework for 21<sup>st</sup> Century learning (2007) has integrated interpersonal skills with media literacy, ICT literacy, literacy of interdisciplinary content and its relation with issues of 21<sup>st</sup> century to meet the global challenges, and development of an individual in a global outlook. However, along with individual and global knowledge the local knowledge i.e. knowledge of one's own environment, should not be neglected and hence the skills should be dependent upon the need of

individuals and society in which they live. But challenges in 21<sup>st</sup> century are common for all, so skills for individuals and society should converge at a common point. Defining such skills can improve assessments of how well prepared young people and adults are for challenges of 21<sup>st</sup> century. People living in different situations will draw to varying degrees on various skills according, for example to cultural norms, technological access, social relations, geographical area, language, social norms, culture, ideology and belief (DeSeCo, 2001). Thus, defined skills will be same for all, but every individual likely to draw more than one skills or constellation of skills as per their unique situations and own unique needs.

### **1.3. Coping Skills for 21<sup>st</sup> Century (CS21C)**

21<sup>st</sup> century has posed many challenges to the individual and societies, such as, balancing economic growth with environmental sustainability, and prosperity with social equity. Further, these challenges will form cumulative challenges in future. And no organism can remain in healthy state under adverse condition for long. Coping with these challenges implies, to sense changes in society and to respond to the change, to recognize and fulfill own needs as a member of local society in particular and global society in general, knowledge of one's physical and social environment that lets an individual to achieve what is important to societies and their individuals, at the same time it demands to understand global nature of needs and transfer of local knowledge to global setting. DeSeCo (2001) opined, "Coping with challenges of time calls for better development of individuals' skills to tackle complex tasks."

The essential skills are requisite to meet the needs and hence to cope up with the challenges of 21<sup>st</sup> century are called 'Coping Skills for 21<sup>st</sup> Century'. The Coping Skills for 21<sup>st</sup> Century will make an individual efficient, productive and able to meet the challenges of 21<sup>st</sup> century. The core aspects of Coping Skills for 21<sup>st</sup> Century are

- These skills could not be developed in isolation it should have cultural, moral and value base.
- These skills are interdependent and interconnected constellation of the skills that are required to cope up with the challenges and to meet the needs.
- These skills are required to cope with the individual, local and global challenges and to meet the aroused needs. Such expression could transfer to attitude and wisdom.

- These skills are adaptive and could transform from specific skills to general skills, from individual skills to social skills.

### 1.3.1. Taxonomy of Coping Skills for 21<sup>st</sup> Century

Rychen & Salganik (2003) have defined competencies to cope up with the challenges and to meet the needs of 21<sup>st</sup> century under Definition and Selection of Competencies (DeSeCo) Project with three focuses: First, ***Act Autonomously***, it does not mean to function in social isolation, it requires an awareness of one's environment, of social dynamics and of the roles one plays and wants to play. Act autonomously requires, understanding the pattern, have ideas of system in which they exist, form and conduct life plans and personal projects and defend and assert rights, interests, limits and needs. Second, ***Individual can Function in Socially Heterogeneous Groups***; it becomes important to manage interpersonal relationships well both for the benefit of individuals and to build new forms of co-operation. Function in socially heterogeneous group requires, relate well to others, co-operate, work in teams, manage and resolve conflicts. Third is, ***Use Tools Interactively*** i.e. Language & symbols, knowledge & information, communication and Technologies.

Thus, defining Coping Skills for 21<sup>st</sup> Century have concern as per Rychen & Salganik (2003) i.e. function in socially heterogeneous groups, act autonomously, and using tools interactively. Each aspect may contain set of skills or constellation of sub skills defined under life skills and 21<sup>st</sup> century skills and may include many other skills depend on the need. To function in socially heterogeneous group requires Adjustment skills (i.e. social, home, school, work place and educational adjustment), Social responsibility skills (i.e. acting responsibly, demonstrating ethical behavior in personal life, work place and society), Human relation skills (i.e. decency, decorum, discipline, empathy, sharing, fellow-feelings, politeness, peace and harmony, and healthy competition), etc. Skills such as Self-direction skills (i.e. taking initiation, decision, risk taking, monitoring, leading, locating resources, transfer of learning and problem solving), Reflective skills (i.e. thinking about thinking), Thinking skills (i.e. creative thinking and critical thinking), Emotional maturity skills (i.e. self awareness, self management, social awareness and social management), Management skills (i.e. monitoring and mentoring time, personnel and resources), etc. are required to act autonomously. Skills such as Digital skills, Info-savvy skills (i.e. asking, accessing, analyzing, applying and assessing), communication skills (in variety of context

through variety of forms) etc. are essential to use tools interactively. Defining such skills depends upon nature of individual and social goals, but should be bound together in an integrated approach of global and local.

Various skills under the Coping Skills for 21<sup>st</sup> Century could be classified as under

### **1.3.2. Nature of Coping Skills for 21<sup>st</sup> Century**

The future is not a single unidirectional track; nor a void; rather, it is a multiple possibilities and uncertainty (Roy Singh, 1991). 21<sup>st</sup> century is likely to be more and more complex web of possibilities with passage of time. As a consequence new challenges will emerge and hence an individual will have to cope up with the emerging challenges. Coping skills are required to cope up with the challenges of the present. But along with coping with the prevailing challenges, it requires to be prepared for emerging challenges and to adjust with the changes. The nature of Coping Skills for 21<sup>st</sup> Century could be...

**Preventive:** To prepare for prevention of crises by to meet future challenges

**Corrective:** To manage problematic situations due to emerged needs

**Adaptive:** To adapt with the changing conditions

**Perfective:** To enhance the quality of life

### **1.4. Coping Skills & Coping Skills for 21<sup>st</sup> Century**

Basically coping is a psychological term which Folkman & Lazarus (1991) defined, “Constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing.” Psychological coping mechanisms are commonly termed as coping skills that deal with a conscious effort to manage the stress and strain aroused due to life’s challenges, such, as interpersonal adjustment, attitude, motivation, locus of control, emotions, etc. Coping skills are post-stress skills, whereas, Coping Skills for 21<sup>st</sup> Century is general skills that deal with managing the challenges that may be responsible for stress in 21<sup>st</sup> century and prepare a future-oriented individual with vision.

### **1.5. Role of Education in Developing Coping Skills for 21<sup>st</sup> Century**

UNESCO Bureau of strategic Planning (2003) has defined aim of Education is to Promote experimentation, innovation and the diffusion, sharing of information and best practices as well, as policy dialogue in education to improve the quality of

education through the diversification of contents, methods and the promotion of universally shared values.

Education is its creative best when it is interwoven with the total social-human-knowledge environment of the future (Roy Singh, 1991). Wasi (1990) defined education as unified field force to indicate the interactions between various particles, such as, human, social and environmental, as per his view, "Education does not exist in vacuum. It is determined by political and cultural milieu, beliefs, doctrines, economy, social mentality and predominant world views. These determining environments are now quickly changing. We should be in a position to understand them and to be able to design education." The Education should play multitask role to respond the changes, it should not only confine to content knowledge but content should have relevance with societies, culture, beliefs, economy and world affairs. Education should realize the sensitivity towards political & culture milieus, economy, nature and changing needs of the local, as well as, global societies that require knowledge of it and transmission of such knowledge. Further, education should develop vision of future and it should provide means to cope with the challenges. This indicates scholastic subjects should have interconnection, and subject matter should have relation with - the local culture, environment, economy and changing need of local as well as global societies, introduce plurality of curriculum inputs, and it should be supported by instructional approach. Wagner et al. (2006) recommended an instructional approach built on set of 3 R's – that is, Rigor, Relevance, and Respect. *Rigor*, for Wagner et al., does not mean content that is difficult for students to master; rather, it concerns what students are able to do because of their learning. *Relevance* means helping students to understand how their learning connects to their further studies and future work settings i.e. transfer of learning from one setting to another. *Respect* means promoting respectful relationships between and among teachers and students; with own self, with the society, that foster academic and social competence. Instructional approach of Wagner et al. (2006) is going in line with the UNESCO's (1997) four pillar of education. In which Wagner's (2006) view defines teachers' role in instruction procedure whereas UNESCO (1997) emphasises upon the students' learning as a result of instructional procedure. Instructional procedure should emphasize on Learning to Learn, where learning will happen by constructing own knowledge rather learning the facts by memorizing or assimilating and

accommodating with previous knowledge. The construction of knowledge could be done by providing opportunities to question, enquire, debate, reflect, and arrive at concepts or create new ideas. As a result of social and cognitive construction; Self-direction skills, Social Responsibility skills, Adjustment skills, Management skills, Emotional Maturity skills, Human relation skills, communication skills, could be developed. NCF (2005) has emphasized on critical pedagogy that helps to explore the individual's needs and environment, connects classroom knowledge to life experiences and is also important to develop thinking skills and reflective skills. The constructivist approach and critical pedagogical approach may encompass various approaches, viz. cooperative learning approach, experiential and participatory learning approach, problem based Learning approach, inquiry-based instructional approach, activity based approach and project based learning approach. Such approaches are found to be effective in developing various skills (Morton, 1993; Galagali, 2008; Olsen, 2010; Zimmerman, 2010; Hillman, 2012; Hughes, 2012; Helaiya, 2010; Amin, 2011 and Shelat, 2013).

Whereas Tingen et al. (2011) developed Classroom Web sites and found that it has potential to support and enhance students' learning by targeting 21<sup>st</sup> century skills, such as collaboration, media literacy, interpersonal skills and self-directional skills, as well as thinking and problem-solving skills, and Sardone & Scherer (2010) suggest content of scholastic subjects could be coupled with Video games, and such a learning approach is helpful to develop 21<sup>st</sup> century skills, such as, Creative Thinking & Innovation, Critical Thinking & Innovation and Communication and Collaboration. In addition to this, skills can be developed if the instructional process gives multiple & diverse means and learning opportunities to an individual to get engaged and practice their knowledge to its relevance (UNESCO, 2004; NCF, 2005; Larson & Miller, 2011 and Colacino, 2013).

There is a need of integrating interconnected scholastic subjects with plurality of curriculum inputs (i.e. ICT literacy, media literacy, peace and human rights etc.) and with, subject matter related to changing needs of society (i.e. social, economical, environmental, geographical and educational). Further, learning to learn approach should be considered for construction of knowledge that means an individual can transform the content knowledge to life situations, and during the process of knowledge construction Coping Skills for 21<sup>st</sup> Century could be developed.

### 1.6. Scaling the Present Level of Education Concerning Skill Development

Purohit (2015) observed children have their own self-sustained cope up mechanism to meet the challenges of the 21<sup>st</sup> Century effectively i.e., “Do the work that you like or like every work you do.” This is just a step forward still miles to go to meet the challenges of 21<sup>st</sup> century. Attempts have been made to integrate life skills in school as co-scholastic subject, CCE has been introduced attempting for the wholistic Development. But still there is a lacuna among students academic profile and social, emotional and interpersonal skills. Skilled individuals are normally distributed, but it is expected to be positively skewed. Even teaching-learning of scholastic subjects has not achieved subject specific skills. The ultimate aim of Language learning is to use language as a tool for communication and to develop creative thinking and critical thinking skills. In addition, articulation of ideas, experiences (NCF, 2005) and some contribution to the literature in terms of creative work is also expected. The present level is quite disappointing. In the quest of multilingualism, Vernacular language is deliberately neglected. There is a blind move toward education in foreign language. As a consequence the student is not able to develop the language specific skills and advanced level skills in any language. Further, over emphasis on Science Education also affect language learning. Even though, Science Education remains product-based. Wherein, least emphasis is given to develop science processes and scientific attitude (Mukharjee, 2007). Likewise NPE (1992) and NCF (2005) expressed Mathematical Education as vehicle to train a child to think, reason, analyze, logical articulation and to pursue assumptions to their logical conclusion. Further, it is also supposed to develop problem solving skills, analytical skills and synthesis skills. However, mathematics education does not impart such skills except arithmetic (Ramanujam, 2012). Mathematics learning has not yet found its utility in daily life. It remains as theorem, rider for solving the mathematical problems. The problem solving skill also not reflected in solving day-to-day life problems.

There is a need to develop of skills that will enable the future generation to address the needs to meet the challenges of 21<sup>st</sup> century. Attempts should meet the desired outcomes. Policy should meet the practices and researches should reach the classroom.

There is a need of paradigm shift in education from learning content to learning to learn. Where, the students explore their own world in the light of curriculum.



## 1.7. Rationale

21<sup>st</sup> century is likely to be more and more complex in passage of time as it is a period where profound changes are taking place both globally and locally that is leading and will lead to various challenges. Coping with today's challenges calls for better development of individuals' skills to tackle complex tasks. Good coping means to recognize and fulfill own needs as a member of local society in particular and global society in general. Rychen & Salganik (2003), have defined 21<sup>st</sup> century needs of society and their individuals i.e. the need to realize one's identity and set goals in complex world, the need to exercise rights and take responsibility, the need to understand one's environment and its functioning, the need to deal with diversity in pluralistic societies, the need to keep up to date with technologies, the need to adapt tools to own purposes, the need to conduct active dialogue with the world, the importance of empathy, and the importance of social capital. Good coping also implies knowledge of one's physical and social environment that lets an individual to achieve what is important to societies and their individuals, at the same time it demands to understand global nature of needs and transfer of local knowledge to global setting. Thus, to survive under complex/adverse conditions and to function smoothly in meeting the demands of time, there is instantaneous need of Coping Skills for 21<sup>st</sup> Century in each individual in the varied time. These skills are defined under three basic concerns i.e. functioning in socially heterogeneous groups, acting autonomously and using tools interactively.

“Education has continued to evolve, diversify and extend its reach and coverage since the dawn of human history. Every country develops its system of education to express and promote its unique socio-cultural identity and to meet the demands of the times” (NPE, 1992). Education is a highway to cope with the challenges and to fulfill the emerging needs and it should be grounded in an individual's physical and social environment. NCF (2005) presents, “fertile and robust education is always created, rooted in the physical and cultural soil of the child, and nourished through interaction with parents, teachers, fellow students and the community.” UNESCO (1997) said, “The formal education systems tend to emphasize the acquisition of knowledge to be detriment of other types of learning, but it is vital now to conceive education in a more encompassing fashion in the light of opportunities of 21<sup>st</sup> century.” Such a



vision should inform and guide future educational reforms in relation to both contents and methods.

Framework for 21<sup>st</sup> Century learning (2007) emphasized that to develop 21<sup>st</sup> century skills, the scholastic subjects of school i.e. Science, Mathematics, Languages and Social Science and their integration with the environment, society, health and hygiene, and global awareness. Researches of Shenoy (2005) and Larson & Miller (2011) are also evident of integrating skills within the curriculum. Further, Shenoy (2005) had designed model curriculum that encompasses skills for crisis management that cut across all the school subjects. Study of Singh (2008) emphasized the life skill programme within the existing school subject whereas, Galagali (2008) discussed topic to be adopted for life skill development. From these researches, the Researcher arrives at the view that to develop coping skill for 21<sup>st</sup> century, the subject matter of scholastic subjects in formal education should have integration with the local needs but the perspective should be global. As the knowledge of scholastic subjects without understanding its relevance with other subject and life, results that, an individual will fit for neither field nor life. NCF (2005) recommends interconnectedness of scholastic subjects by softening of subject boundary, plurality of curriculum inputs and subject matter that could incorporate local knowledge and traditional skills.

The transaction of such subject and subject matter should be in such a way that an individual can relate it with life and other subjects and as a result desired skills can be developed which indicates that the instructional process should be based upon construction of knowledge i.e. cognitive construction and social construction through active dialogue with teachers, fellow students, parents, and community members. Further, Morton (1993) found cooperative education is effective in developing Interpersonal skills compared to career and life effective skills, Galagali (2008) used experiential and participatory learning for life skill development and Zimmerman (2010) found Problem Based Learning (PBL) as effective Instructional approach for life skill education, Olsen (2010) and Hillman (2012) advocated Inquiry-Based Instructional Approach, Hughes (2012) advocated authentic and active learning strategy, such as, Project Based Learning (PBL). Whereas Tingen et al. (2011) developed Classroom Web sites and found that it has potential to support and enhance students' learning by targeting 21<sup>st</sup> century skills, such as collaboration, media literacy, interpersonal skills and self-directional skills, as well as thinking and

problem-solving skills, further Web 2.0 tools such as blogs, wikis, and podcasts enhance teacher Web sites to prepare students for the future. Sardone & Scherer (2010) suggest content of scholastic subjects could be coupled with Video games, and such a learning approach is helpful to develop 21<sup>st</sup> century skills, such as, Creative Thinking & Innovation, Critical Thinking & Innovation and Communication and Collaboration. Further Helaiya (2011), Amin (2011) and Shelat (2013) used various activities to develop life skills and other cognitive aspects with the hunch that Activity based learning is the most effective way to develop skills. In addition to this, skills can be developed if the instructional process gives multiple & diverse means and learning opportunities to an individual to get engaged and practice their knowledge to its relevance (UNESCO, 2004; NCF, 2005; Larson & Miller, 2011 and Colacino, 2013).

Research of Shenoy (2005), Galagali (2008), Kenneth (2008) and Zimmerman (2010) reveals that life skills education should be given at the secondary school level. Secondary school level is very crucial in forming the young adolescent minds as this phase is transition phase and adolescents undergo physical and mental changes. Further, at this level they are forming image and impression of values, positively and negatively, so their energy must be channelized in proper direction (Erikson, 1959 and Roy Singh, 1991). Further, Researches of Shenoy (2005), Galagali (2008), Kenneth (2008) and Zimmerman (2010) are being conducted in area of life-skills development among adolescents and developed an educational programme for them.

For this, the experiences of the practitioner of various educational institutions at higher education level such as teacher education institutes, institutes of mass-media education, institutes of environmental science, etc would be considered as they have vast experience of field and knowledge base. The programme could be developed by considering the innovative practices followed in some of the schools affiliated to State board of secondary education, Central Board of Secondary Education (CBSE) and International Boards. NCERT has recommended life skill education and construction of knowledge as a part of curriculum and it was adopted in CBSE affiliated schools. Various International Boards affiliated schools have their own curriculum and its transaction procedure e.g. Schools affiliated with International Baccalaureate follow different curriculum and its transaction process based on learning to learn such as

Discovery Learning Approach, Collaborative Approach, Co-operative Approach and Experience Based Learning.

For coping with the challenges and to meet the demands, it is essential that an individual should be able to explore one's own physical and social environment and education provides means to explore one's own physical and social environment by sensitizing towards the needs of 21<sup>st</sup> century and transaction of the means. Therefore, researcher strongly is in favour of using learning to learn approach based Activities that prompt further learning within curriculum (by softening subject boundaries i.e. interconnected and interdisciplinary subject areas & integrated with multiple curriculum inputs) for exploring Coping Skills for 21<sup>st</sup> Century.

### 1.8. Research Questions

- a. What are the challenges students are facing in the 21<sup>st</sup> century?
- b. What are the educational needs aroused due to challenges of 21<sup>st</sup> century?
- c. What are the essential skills to be developed among students in 21<sup>st</sup> century?
- d. What kind of curriculum inputs could be integrated within the present curriculum to address the challenges of 21<sup>st</sup> century?
- e. What kind of learning experiences could be provided to develop Coping Skills for 21<sup>st</sup> Century?
- f. To what extent classroom size affects the learning?

### 1.9. Statement of the Problem

*A Study of Coping Skills for 21<sup>st</sup> Century at Secondary School Level*

### 1.10. Objectives of the Study

1. To explore the coping skills for 21<sup>st</sup> century expected in students of secondary level.
2. To develop educational activities to explore coping skills for 21<sup>st</sup> century among students of secondary level.
3. To implement educational activities for exploring coping skills for 21<sup>st</sup> century among students of secondary level.
4. To develop a Tracker on the coping skills for 21<sup>st</sup> century.

## 1.11. Explanation of the Terms

### Challenges of 21<sup>st</sup> Century

Challenges of 21<sup>st</sup> century are considered as illustrated by Rychen & Salganik (2003). The challenges are as follow

- Technology is changing rapidly and continuously, and learning to deal with it requires not just one-off mastery of processes but also adaptability
- Societies are becoming more diverse and compartmentalized, with interpersonal relationships therefore requiring more contact with those who are different from oneself
- Globalization is creating new forms of interdependence, and actions are subject both to influences (such as economic competition) and consequences (such as pollution) that stretch well beyond an individual's local or national community

### Coping Skills for 21<sup>st</sup> Century

Coping Skills for 21<sup>st</sup> Century are clusters of actions, which express ease and precision in recognizing and meet the needs to coping with challenges of 21<sup>st</sup> century in terms of functioning in socially heterogeneous group that comprise skills, such as, Adjustment skills, Human relation skills, Social Responsibility skills and Sustainability skills; Act autonomous that comprises skills, such as, Self-direction skills, Reflective skills, Thinking skills, Management skills and Emotional Maturity skills; and using tools interactively that comprises skills, such as, Info-savvy skills, Digital skills and Communication skills.

### Educational Activities

Educational activities are a cluster of learning experiences for the students of standard IX based on learning to learn approach and focused on identified Coping Skills for 21<sup>st</sup> Century. The learning experiences are designed for the integrated content of scholastic subject with the subject matter required for the skills. Further, the learning experiences were comprised of power-point presentation, Moodle, demonstration and practices, activities, focused group discussions, narratives and descriptive, field visits.

**Tracker**

Tracker on the Coping Skills for 21<sup>st</sup> Century is expected to have various skills for cope with the challenges of 21<sup>st</sup> century and their descriptor.

**1.12. Delimitation of the Study**

The study was delimited to students of standard IX.

**1.13. Outline of the Conceptual Framework**

- Coping with challenges and to meet the needs of 21<sup>st</sup> century, it is essential to have Coping Skills for 21<sup>st</sup> Century that enable an individual to explore one's own physical and social environment proficiently.
- Education provides means to explore one's own physical and social environment through knowledge and sensitizing towards the needs of 21<sup>st</sup> century and transaction of the means.
- There is a need to integrate interconnected scholastic subjects with plurality of curriculum inputs and with subject matter related to changing needs of society (i.e. social, economical, environmental, geographical and educational).
- Further, learning to learn approach should be considered for construction of knowledge. The constructed knowledge should connect to various dimensions of life situations, and during the process learning coping skills could be developed.