INTRODUCTION

Education is the process of unfolding the hidden potentials of an individual and helps to transform into a wholesome noble soul. Mahatma Gandhi defined education as “by education I mean an all-round drawing out of the best in child and man - body, mind and spirit”. He visualized that education should integrate the physical, mental, moral, cultural and spiritual aspects of human personality. The education should enable the learner to formulate a positive outlook towards life and to accept a stand which suits the well being of the society and the individual as well. It inspires and enables individuals to develop their capabilities to the highest potential levels throughout life, so that they grow and well equipped for work and contribute effectively. Education gives the capacity to think, work properly, to make decision in life and teaches how to act in different situations. But contrary to his noble ideas, the present system of education emphasizes more on examination and its results. The students are subjected to rote learning to memorise the facts and thereby creating anxiety and stress. The present system has failed to achieve the goal for developing an integrated personality. An integrated well balanced personality should be able to cope up with the harsh realities of life.

Education helps to unfold one’s own identity. It has a key role in equipping the students to thrive in the knowledge era. They need special skills with which they can manage their life. The 21st century being the century of generating knowledge, leads to create a global knowledge society, where attainment of adequate knowledge and necessary skills are the important factors to make the society prosper. Thus, the generation of knowledge and development of skills is the basic hallmark for establishment of a knowledge society and for actualizing it there is a need to ensure excellence in education at all levels.

The new millennium was ushered in by a dramatic technological revolution and we can see the changes in all spheres of life. Education should be structured to meet the needs of students in this 21st century world for that it must address real-life problems and issues important to both society and Nation.
Education has a prime role to play in creating responsible, innovative, analytical and also compassionate citizens. The education system must respond to changes in a society as it transforms by time. Then only education will be relevant to our system. For the progress of our country, our institutions of learning must gear up for facing challenges of a knowledge based and technology driven world.

1.1 Higher Secondary Education

The Kothari Commission (1964-66) suggested the restructuring of education into a uniform pattern of 10+2+3 education all over the country, implying 10 years of undifferentiated education for all, with diversification into academic and vocational streams at the +2 level. In Kerala, after the 10 years of general education, the two year course was linked to colleges and was called Pre-degree. Kerala government decided to delink pre degree course from colleges in consistent with National Education Policy, Kerala Higher Secondary Department was formed in the year 1990 and course was introduced in 31 selected Government high Schools. The two year course was named as higher secondary (Plus Two) course. The higher secondary of education cover the age range 15-17 and grades XI & XII.

The higher secondary stage assumes great significance in the life of students, as students for the first time move toward diversification after ten years of general education. They choose either specialised academic courses or job oriented vocational courses. The higher secondary stage may be the end of the formal education for a small percent of students, leading to the world of work. But for other students, it would be a bridge to the tertiary stage of education. Normally, only a small percentage of student population reaches the tertiary level. The quality of these people depends on the foundation laid in early years especially at the higher secondary stage. They are expected to make meaningful contributions to developmental efforts in agriculture, industry, business and various other social services. Hence, the students at the higher secondary stage must be fully equipped with life skills so that they can lead a successful life in the society.
Moreover, higher secondary education is the stage at which the student’s intellectual skills are developed into formal thinking, with sudden augment in physical and psychological development. It is a stage of education which constitutes a link between school education and higher education. It is a unique period in a student life as there are transformation from childhood to youth, develops their personality and crucial period for character formation. It is the time when they face a turning point in their life and are in a dilemma to select the course of study, either professional or non-professional, and what type of jobs to select etc. This is the period when there is a spurt of growth takes place and they are under the tension of excessive growth hormones, identity and role confusion. It is at this time of age the interpersonal relation makes a strong influence on them and attraction towards opposite sex and peer pressure puts them in confusion. So the investigator decided to take higher secondary school students as sample because if they develop life skills they can face the challenges of changing situations and make them a contributing member of society. For this, the life skills education is imperative which helps for the harmonious development of personality.

1.2 Life Skills Education

The life skills education equips the students with necessary life skills which benefit the students linguistically, socially, cognitively, and academically. It empowers learners so that they can make right decisions, manage issues that concern them and ultimately enhance the quality of lives. Life skills help the adolescents to understand their strength and weakness and they are able to discern available opportunities and prepare to face the possible threats. It improves their abilities to deal effectively with the demands and challenges of everyday life. It plays an important role in the promotion of health in its broadest sense, in terms of physical, mental and social well-being.

Life skills enable adolescents to explore alternatives, weigh pros and cons and make rational decision in solving each problem or issue and facilitate to establish productive interpersonal relationships with others. It builds up their
social skills, moral competence and mutual respect. In addition, it fosters initiative, creativity and adaptability to meet the demands and challenges of everyday life and promote the ability to maintain a state of mental wellbeing and to demonstrate this in adaptive and positive behaviors while interacting with others. It can expedite promotion of personal development, the prevention of health and social problems and protection of human rights and finally to create worthwhile competencies among them.

1.3 Gandhiji’s views on Life Skills Education

Mahatma Gandhi’s life was a good example for the world to lead a successful life by facing the challenges of life and society. He imparted the lesson of truth, Non-violence and peace for the victorious life. The philosophy of Gandhi was based on truth, sacrifice, non-violence, selfless service and cooperation. According to Gandhiji one should be brave and present his views, suggestions and thoughts in an appropriate way. These form the foundation for self awareness, empathy, communication skill, problem solving and decision making skill, the important component of life skills. Gandhi’s system of Satyagraha was based on nonviolence, truth and honesty. Satyagraha is a holistic approach towards life, based on the ideals of truth and moral courage and clearly emphases the components of life skills such as stress management, interpersonal relationship, critical thinking, empathy and self awareness. According to Gandhiji “total non-violence consists in not hurting some other one’s intellect, speech or action per own thought, utterance or deeds and not to deprive some one of his life.” The principle of non-violence is shattered by every evil thought, false utterance, hate or wishing something bad onto someone. Thus, Gandhiji’s philosophy forms the structure for the foundation for life skills education.

1.4 Need and Significance of the study

The quality of the youth population depends largely on their education and occupation. It is therefore, imperative to create increasing opportunities for them to develop their personality and their functional capability and make them
economically and socially useful. The programmes for youth are to be planned imaginatively and implemented effectively by all concerned. Moreover, the explosive and astonishing technological and scientific advancement proceeding at the rate of geometric progression a generally passive and culture bound people cannot cope with the multiple issues and problems of the modern world, unless they are aware of their abilities, are able to make right decisions at appropriate time, can think critically and creatively and devise new ways to deal with the complex changes. For this, the life skills education is imperative which ultimately helps for the harmonious development of personality.

The investigator conducted the study among higher secondary school students because higher secondary stage is significant in many ways. It is the stage of maximum challenge and the students in this age-group are passing through a critical phase of their lives, transition from adolescence to youth, they have to take important decisions concerning their future career by choosing suitable courses. In fact, more than the need and aptitude, it is the awareness and performance of the students at this stage that ultimately determines their future. Whether they would be able to get into a job or a vocation or pursue further studies of their own choice/preference is the uppermost concern in the minds of students and their parents. It causes anxiety and stress among students, which is avoided by careful planning of life skills education classes at this stage.

Further, the students in the higher secondary stage are passing through a transition from adolescence to youth. This stage is characterised by the process of maturity of body and mind. It is at this stage that abstract thinking develops predominantly. Similarly, traits like self-consciousness, self-assertion, self identity and personal preferences are typical of this stage. At this stage, learners’ interests and aptitudes begin to crystallise and stabilise which have a potential to shape the future of the students. A feeling of anxiety about the future also begins to haunt them. At this stage, there is an imperative need of imparting life skills education to the students. Hence, the investigator selected
the study for developing life skills among students so that they can thrive well by adjusting themselves in the society. As a result, the students start developing their own thinking and independence of mind and they are better placed to exercise a choice of course keeping in view their needs, interests, capabilities and aptitude, which would enable them to cope with the challenges of future. The students also show strong likes and dislikes, reactions and adventurism and have strong peer group influences. There is a tendency to imitate adult behaviour and roles, defiance, moral reasoning and challenging attitude towards the established ideas, practices and authority.

An important feature of this stage is that it is a transition from the general and undifferentiated curriculum to courses of specialised nature. Therefore, curriculum at this stage has all the important features of general education, specialization and characteristic of the tertiary education. In order to equip the youth to cope with change in life it is essential that they should equip with necessary life skills. At this juncture, the investigator’s attempt to develop life skills turns out to be relevant.

Moreover, the report of UNICEF ‘State of world children 2011’ focuses the pathetic condition of younger generation and throws light on the bitter fact that around 20 per cent of the world’s adolescents have mental health or behavioural problem. Depression is the single largest contributor to the global burden of disease for people aged 15-19, and suicide is one of the three leading causes of mortality among people aged 15-35. Globally, an estimated 71,000 adolescents commit suicide annually, while up to 40 times as many make suicide attempts. About half of lifetime mental disorders begin before age 14, and 70 per cent by age 24. The prevalence of mental disorders among adolescents has increased in the past 20-30 years; the increase is attributed to disrupted family structures, growing youth unemployment and families’ unrealistic educational and vocational aspirations for their children. A recent study conducted by WHO in 2009 shows that young people are at risk, and that suicide is the second largest cause of mortality in the 10-24 age group.
The India today—a leading news magazine reports that in every 90 minutes a teenager tries to commit suicide in India and in every 6 hours one succeeds in the attempt. It is very heartbreaking that more adolescent die of suicide than AIDS, cancer, heart disease, obesity, birth defects and lung disease. The National Crime Records Bureau (NCRB) reveals that 5,857 students committed suicide in 2006-07 which means sixteen (16) suicides per day. Globally suicide is the fourth leading cause of teen deaths, in India it is number one in some areas and is the third largest killer at all across. Over 150 students ended their lives across the country last month.

When we scrutinize all these cases, it reveals the inability of adolescents to cope with the stress is the main reason for this tragedy. They are not prepared to face the challenges of ever changing world. They consider themselves as a failure in life and rescue in suicides. It is more painful that we are losing the most productive age group. It is in this context that the need for an educational intervention has been strongly felt. Therefore, empowering adolescents is the only solution for tackling this crisis, since education is considered to be a panacea for all evils. Hence, there is a greater need to equip adolescents with life skills, so that they can cope with the challenges and pressures. In this connection, a study to develop life skills is considered to be significant. Life skills enable the individuals to cope up with the challenges of life. It helps to make positive differences in the life. Therefore, investigator attempted to develop a module for developing life skills among students, and the results of the study can use the educators to formulate measures to impart life skills education at all levels of education system and to create an empowered citizen and thus an empowered Nation.

Besides this, the investigator analysed the curriculum of higher secondary stage and found that programmes for developing life skills among students are very limited and the teachers are using old strategies for transacting the content of curriculum. There is a felt need for the learning materials for developing life skills at higher secondary level. In this context, the study to develop life skills through select pedagogic strategies among higher secondary school students becomes highly relevant.
In Kerala, the education system adopted constructivist approach for transaction of the curriculum. It is implied that the constructivist approach helps to develop the necessary skills among students to live successfully in the society. Still the students are not getting the benefits. It is of the assumption that though they have adopted constructivist approach its effect is not up to the expected level. It may be due to the teachers are still following the traditional methods for transaction of curriculum, or the teaching learning methods they are using is not good enough to develop the skills among students. Hence, the researcher took up the study on developing a module incorporating some interactive pedagogic strategies for developing life skills.

Majority of the studies the researcher reviewed shows that the life skills education is synonymous to health education and is imparted to reduce drug addiction, HIV/AIDS and peer pressure. There are many researches on life skills education but studies giving concrete evidences on developing life skills are lacking. Researches in the area of environmental education and life skills also found to be very rare. So the researcher wanted to explore this area and also find potentiality of environmental education for developing life skills. Thus the investigator contemplated study on this area.

1.5 Statement of the Problem

The study is designed to develop life skills through select pedagogic strategies among higher secondary school students. Investigator adopted experimental cum survey method for the study and selected higher secondary school students as sample. Investigator used life skill inventory, environmental awareness test, questionnaire for science teachers for collecting information. The pre test post test nonequivalent control group design was used for the experimental study. The present study is entitled: DEVELOPMENT OF LIFE SKILLS THROUGH SELECT PEDAGOGIC STRATEGIES AMONG HIGHER SECONDARY SCHOOL STUDENTS.
1.6 Definition of Terms

1.6.1 Life Skills

In the present study, the investigator considered life skills as the ability of individuals to face the day to day life and its allied problems successfully like, knowledge of students about themselves (Self awareness), feeling of others hardship and difficulties as theirs (Empathy), making objective judgments based on reasons and empirical evidences (Critical thinking), confronting day to day life problems constructively (problem solving), novelty in thinking (Creative thinking), making right decisions at right time (Decision making), making genial relationship with others (Interpersonal relationship), effectiveness in verbal and nonverbal expression (communication skill), identifying and reacting to emotions and managing stress effectively (stress management).

Hence the components selected for the study are: Self awareness, Empathy, Critical thinking skill, Creative thinking skill, Problem solving skill, Decision making skill, Interpersonal relationship, Communication skill and Stress management.

1.6.2 Development of Life Skills

In the present study, the development of life skills means the life skills developed among the students through the life skills education module based on environmental education. The content of the module are man and environment, air pollution, water pollution & water conservation, water scarcity, ozone depletion, global warming, green house effect, deforestation, soil pollution, noise pollution, solid waste and radioactive pollution and the select pedagogic strategies were used for the transaction of the content.

1.6.3 Environmental Awareness

Environmental awareness refers to knowledge and consciousness created among the students for the protection and preservation of environment. As the content of the life skills education module is environmental education, the investigator is interested in finding out the environmental awareness among students.
1.6.4 Pedagogic Strategies

Pedagogic strategies mean the instructional strategies used for the transaction of the content. The investigator identified the following strategies for the study.

- **Cognitive apprenticeship**: Cognitive apprenticeship consists of six methods of teaching—modeling, coaching, scaffolding, articulation, reflection and exploration and aimed at encouraging learner autonomy in carrying out expert problem-solving processes.

- **Brain storming**: Brain storm is the free, uninhibited generation of ideas about a particular topic or question in a given period of time.

- **Role play**: An informal dramatization in which pupil acted out a suggested situation. Provides experience in how to handle a potential situation in real life, increasing empathy for others and insight into one’s own feelings.

- **Concept mapping**: Process of representing the conceptual structure of a subject/discipline in a two dimensional form. A concept map consists of circles or boxes that contain a concept and different concepts are connected with lines, describing how these concepts are related to each other.

- **Debate**: A pedagogic strategy for dealing with controversial issues in which the positive and negative aspects are argued for and against by the students.

- **Future’s wheel**: A graphical representation of the causes and the secondary and tertiary consequences of events. The event is placed in the middle of a piece of a paper and then small spokes are drawn from the centre. The problem wheel rolls into future consequences which roll into other negative and undesirable situations.
1.6.5 Higher Secondary School

Higher secondary school is the fourth stage of education. The 11\textsuperscript{th} and 12\textsuperscript{th} year of schooling in the 10+2+3 pattern in Kerala. It is also known as +2.

In this study, investigator taken the stage XII of Higher secondary course for the experimental study.

1.7 Objectives

1. To design and prepare a life skills education module (LSEM) on environmental education

2. To test the effectiveness of the life skills education module (LSEM) for developing life skills and environmental awareness among higher secondary school students

3. To examine the pedagogic strategies used by teachers for transacting environmental education at higher secondary level

4. To study the programmes and constraints in conducting life skills education at higher secondary stage

5. To suggest strategies for promoting life skills and environmental education at higher secondary level

1.8 Hypotheses

- There is no significant difference between the experimental and control groups in the pre test, post test and delayed post test scores of Life Skills Inventory

- There is no significant difference between the experimental and control groups in the pre test, post test and delayed post test scores of Environmental Awareness Test

1.9 Methodology

The study was carried out to develop life skills through select pedagogic strategies among higher secondary school students. Survey and experiment was
the method used to collect the data. The survey method was used to identify the different interactive pedagogic strategies used by teachers and the difficulties involved while implementing it in higher secondary classroom. Investigator designed a life skills education module (LSEM) for the experimental phase of the study and tested its effectiveness with the pre test, post test control group design. The sample consists of 116 higher secondary school students and 174 higher secondary school teachers. Investigator used Life Skills Inventory, Environmental Awareness Test for collecting data from higher secondary school students and a Questionnaire was used for collecting the data from teachers.

1.10 Scope and Limitations

The main purpose of the study is to develop life skills among higher secondary school students. For this purpose, the investigator selected a representative sample of Higher Secondary School Pupils and tools of accepted validity and reliability was used to collect data. The study also focused to investigate teacher’s knowledge about lifeskills, the different pedagogic strategies and the difficulties involved in implementing these strategies in classroom because this information is necessary to understand the present condition of learning at higher secondary level. So the investigator can suggest measures to improve the present situation.

All precautions to ensure valid results from the experimental study such as preparation of tools, procedure of data collection and techniques of processing data were taken. It is hoped that the present study will yield reliable and valid generalizations which will help the investigator to know the extent of life skills among higher secondary students. The findings will help the educators to take proper measures for boosting life skills education at school level and to improve learning process in classroom.

Even though maximum care and precautions were taken to make the study more objective, valid and reliable the following limitations are anticipated.
1. The study was delimited to pupil of std XII in teaching select contents of Biology for a period of six month.

2. Investigator delimited the components of life skills in to nine –self awareness, empathy, critical thinking, creative thinking, problem solving, decision making, communication, and interpersonal relationship and stress management.

3. Sample selected for the study is not state-wide sample. It was confined to one district-Malappuram.

Still it is hoped that the results obtained will help the investigator to suggest measures to impart life skills education at school levels.

1.11 Format of the Research report

Chapter I Contains a brief introduction about the problem under investigation, the need and significance of the study, followed by statement of the problem, definition of key terms, the objectives and hypotheses. The methodology in brief and scope, delimitations and limitations of the study.

Chapter II explains about the review of related literature.

Chapter III describes methodology in detail – the methods adopted for the study, the variables under study, the samples selected for the study, the tools used for data collection, the development of module for developing life skills, the procedure adopted for data collection, and a short account of the statistical techniques used for data analysis.

Chapter IV presents the analysis of the data in detail, followed by the discussion of results.

Chapter V summarizes the study in retrospect and presents the major conclusions arrived at, followed by a short discussion of the implications of the study. A few suggestions for further research in the area are also provided.

The report followed by a fairly exhaustive Bibliography. The bibliography is followed by a series of Appendices pertaining to the study.