CHAPTER I
INTRODUCTION

“All great deeds and all great thoughts have a ridiculous beginning.

Great works are born on a street corner”

Albert Camus (1957) – An Existentialist & Nobel Laureate

1.0 INTRODUCTION

In India there are certain sectors of the learner society which need the total governance and attention on the part of the Teachers, Educators and Policy Makers. One such sector comprises the so called wayward children dwelling on the streets, found and picked up either by Governmental Agencies or NGOs cum philanthropists or at times even by illegal social elements. These children otherwise can be termed- the ‘Unaccompanied’ as they require someone’s utmost care may be till one point of their life. The presence of such unaccompaniedness is a phenomenon worldwide. This most vulnerable sector of the society suffers from deprivations of all forms. Due to their distressed conditions, they are forced to live on the streets and without proper guidance live on their own, earning their daily bread by some means or the other. Many among this category are the ones who run-away from their homes and thus become abandoned. Their growing number is alarming and their existence remains visible in every society. It is difficult to support them with vital services, especially to make them educated. Educating them and making them live on par with other learners of the society is definitely a challenge, especially to a growing nation like India.
Steps are taken both at the Central and State government levels to initiate certain Action Plans of Education for this group of street dwellers, who are unaccompanied and unguided. It is important to respect their feelings and existence as human beings equivalent to any other fellow beings. When given proper care, guidance and attention they turn out to be the best products. Under these refinements and reformatory circumstances there is no wrong in addressing them ‘Unaccompanied Learners’ (UAL) as the added assets of the society.

The learners have varied needs. When their basic needs are met with, it becomes essential to move on to satisfy their educational needs. It is only through education they gain their empowerment. The social stigma on them could be totally erased if they are liberated out of illiteracy. When they are found unaccompanied at the childhood stage itself it becomes comparatively easier to impart them pre-primary education. If they are found and picked up in the midway stage of their life that is during the adolescent stage it becomes slightly critical and difficult for them to cope up with the general educational system prevalent in the Secondary schools.

Learning English or learning other subjects through English poses a big problem not only to normal category learners, but also to this category of Unaccompanied Learners. It is to identify their exact learning needs. The medium of instruction if it is Mother Tongue or Regional Language plays an important role in cutting down their barriers.

The three language formula followed in all Indian schools needs mention worthy here. The normal learners who are governed by their parents and elders at home and teachers at school find it difficult to learn through English. They feel learning through vernacular medium or through regional languages provide them more learning opportunities.
Based on the initiatives by the Governmental Agencies and by the Non-Governmental Organisations (NGO’s) and by personal motivation, the researcher conducted a study with a target group of Unaccompanied High School Learners in the city of Bangalore. Any step of this kind, is to give them proper guidance, educate them, and make them self-confident in their skills thereby making them valuable citizens.

Ever since India became independent, several Education Commissions and Committees gave many recommendations to improve the quality aspect of education. To mention a few, Mudaliar Commission of 1952-53 and Kothari Education Commission of 1964/66 have come out with excellent recommendations for giving a face lift to the entire system of School Education. Since the establishment of NCERT on 1st September 1961 by the Government of India to improve the quality of School Education especially at secondary level, the country has seen several curriculum documents such as, Curriculum Framework of 1988, National Curriculum Framework of 2000 and the Present National Curriculum Framework of 2005.

The National Policy on Education (NPE) 1986 has very rightly recommended to identify competencies and values to be nurtured at different stages of school education. The National Curriculum Framework (NCF) 2005 is indeed a boon and it makes an amended departure from the previous NCF 2000 especially in terms of paradigm shifts in School Education like “connecting knowledge to life outside the school; ensuring that learning is shifted away from rote methods; enriching the curriculum to provide for overall development of children rather than remain textbook centric; making examination more flexible and integrated into classroom life and nurturing an overriding identity informed by caring concerns within the democratic polity of the country.”
The 130 page NCF 2005 document has touched upon almost all aspects of School Education right from Std. I to XII and teachers and teacher educators need to understand the various concepts that have been highlighted and discussed, for example, constructivist approach to learning, critical thinking, self-reflection and critical pedagogy.

1.1 SYSTEM OF EDUCATION IN INDIA

India's education system is divided into different levels such as Pre-Primary education, Primary education, Upper primary education, and Secondary and Higher Secondary education. The secondary education stage is the most vulnerable period of time in the life of students as they are in the adolescent age. It is at this stage they need guidance, so that they do not go astray. They are to be educated in a creative manner and their rich sources of hidden energy within them need to be tapped and to bring them up in the society as good citizens.

At different levels of the education system in India, departments are constituted correspondingly in order to maintain the quality of education. SSA (Sarva Shiksha Abhiyan), RMSA (Rashtriya Madhyamik Shiksha Abhiyan), RUSA (Rashtriya Uchchatar Shiksha Abhiyan) is the major plans which cater to the concept of Education for All (EFA).

1.1.1 EDUCATION FOR ALL

Education for All (EFA) is led by United Nation Educational, Scientific and Cultural Organisation (UNESCO). EFA is a global movement. The aim of EFA is to meet the learning needs of all children, youth and adults by 2015. UNESCO is the mandatory body set up to reach the education for all. In India the government and other agencies
are working in collaboration with UNESCO to realize this goal. To evaluate each
country’s progress with regard to the attainment of EFA goals, UNESCO has developed
the Education Development Index (EDI). This measures four of the six EFA goals viz.,
(i) Early Childhood Care Education (ECCE), (ii) Literacy, (iii) Gender, (iv) Quality.
The other remaining two goals are Universal Primary Education (UPE) and to promote
Learning and Life Skills for young people and adults.

1.1.2 SARVA SHIKSHA ABHIYAN

SSA is the prestigious Indian Government Programme run in tune with the EFA
Principle. It aims at the Universalisation of Elementary Education. This effort is as
mandated by the 86th amendment to the Constitution of India, making free and
compulsory education to the children of 6-14 years age group, a fundamental right. The
pioneer of this programme was Atal Bihari Vajpayee. It started operating since 2000.
The goals of SSA for 2015 are to open new Schools in areas where there are no schools,
open new schools, to expand the existing infrastructure and to maintain. Lack of
teachers is to be addressed and to provide development programmes for existing
teachers. Provide quality elementary education which includes life skills also. It must
have a special focus on education of girls and children with special needs. It also aims at
computer education.

1.1.3 RASHTRIYA MADHYAMIK SHIKSHA ABHIYAN

RMSA is the ‘National Mission towards Secondary Education.’ This is an extended
programme of SSA and focuses on the development of secondary education in public
schools in India. This too comes under the Ministry of Human Resource Development,
Government of India. In March 2009 it was launched.
The objectives of RMSA are

- To enhance quality of Secondary Education and making all secondary schools conform to prescribed norms.
- To remove gender, socio-economic and disability barriers.
- Aiming for Universal access to secondary level education by 2017, i.e., by the end of the XII Five Year Plan.
- Aiming at Universal retention by 2020.

1.1.4 RASHTRIYA UCHACHATAR SHIKSHA ABHIYAN

RUSA is ‘National Higher Education Mission’. It is initiated in 2013 by the Ministry of Human Resource Development, Government of India. It aims at the holistic scheme of development for higher education in India at tertiary level. It also provides strategic funding to higher education institutions throughout the country.

Equal development of all higher education institutions is the major criterion. Rectifying weaknesses in the higher education system is given top priority. Raise the gross enrolment ratio to 32% by the end of XII plan in 2017 is the utmost concern now.

1.2 SIGNIFICANCE OF ENGLISH LANGUAGE LEARNING IN INDIA

Language is the most effective means of communication. Although other living beings communicate through sound and movements, it is human beings who possess a refined form of communication of a highly sophisticated level. The Oxford English Dictionary defines the word ‘Language’ as “the whole body of words and of methods of combination of words used by a nation, people or race, a tongue, which implies that a language can exist in spoken as well as written forms”. According to Edward Sapir, “Language is a purely human and non-instinctive method of communicating ideas,
emotions and desires by means of a system of voluntarily produced symbols. These symbols are in the first instance auditory and they are produced by the organs of speech.

Language is a complete yet highly versatile code used for communication. It is the unique characteristic of human race. Human language is a signalling system which uses vocal sounds. It is based on man's ability to speak. Other devices of expression of ideas include gestures, signs, drawings, sculpture etc. The nexus between language and our ideas, thoughts and emotions is very close. Since language is both a cause and outcome of man's social existence, it is in a state of constant modification. Man’s thought is still interesting and followed. We think through language and need language to express our thoughts. This means man creates new knowledge through language and uses it to the store-house of human culture civilization.

Pandit Jawaharlal Nehru persistently said “English is the major window of the Modern world.” Three language formula is followed in our Country. Mother tongue mostly is the regional language, Hindi is our National language, and English the international link language to communicate with members from other parts of the globe and sometimes with our own people. This situates us in the context of learning English and its significance in India. It is important to learn English so that we can converse with people and share our ideas and bring about development in our country. The study environment for higher education requires that we learn English language well.

1.2.1 ENGLISH LANGUAGE TEACHING AT SECONDARY SCHOOL LEVEL

It is important that Indian students must be given a good foundation to learn English at Secondary school level as it is the right stage to impart the basic components and skills of English. This is a stage when students are open to learn everything. Their minds are fresh to receive categoric presentation of concepts. The language elements presented
systematically at different stages of Secondary level will enable the students to progress in learning this foreign language with ease.

### 1.2.2 AIMS AND OBJECTIVES OF TEACHING ENGLISH TO THE SECONDARY SCHOOL LEARNERS

The following are the main objectives of teaching English at Secondary level

- To develop knowledge and understanding of grammar.
- To develop abilities to make use of the grammar while practising spoken English.
- To gain confidence while using English Vocabulary.
- To develop interest in reading English literature.
- To develop self-study habit.
- To enhance competencies in writing essays and gist of the passage in own words.
- To develop an insight and favourable attitude towards learning English language.
- To develop the understanding about rules of grammar and their use in writing English.

### 1.3 CONCEPT OF EDUCATIONAL TECHNOLOGY

Educational technology is the effective use of technological tools in learning. As a concept, it concerns an array of tools, such as media, machines and networking hardware, as well as considering theoretical perspectives for their effective application.

The Association for Educational Communication and Technology which is otherwise the professional society for Educational technology, defines Educational Technology as
“the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources.”

1.3.1 USE OF EDUCATIONAL TECHNOLOGY FOR LEARNING ENHANCEMENT

Educational Technology (ET) is the efficient part of any learning system to adapt and adopt methods, processes and products to serve identified educational goals. The methods, processes, and products made use of in ET to meet specific educational aims. Educational Technology uses all human and non-human resources in a systematic manner to find viable solutions to educational problems. With the advent of digital media which ushered in interactivity and interconnectivity the learners are helped to learn in an effective and interactive manner. It has developed various innovative methods to accelerate learning in children. These methods are learner centric. They allow the learners to progress at their own pace. Multimedia Learning Packages are developed as a result of the advancement in Educational Technology. These serve to ease out the burden of the teacher. They also strengthen the individual student’s learning.

1.3.2 NCERT’S INITIATIVES TOWARDS USING TECHNOLOGY IN CLASS ROOMS

The National Council of Educational Research and Training (NCERT) is an apex resource organization set up by the Government of India, to assist and advise the central and state governments on academic matters related to school education. It was established in 1961. Central Institute of Educational Technology (CIET) is a constituent unit of the NCERT, an autonomous organisation under the Ministry of Human Resources Development, Established in 1984 with the merger of the Centre of
Educational Technology and Department of Teaching Aids, its chief aim is to promote Educational Technology especially mass media singly or in combinations as multimedia packages to extend educational opportunities and improve quality of educational processes at the school level. It brings technology into the class rooms.

1.3.3 FOCUS ON EDUCATIONAL TECHNOLOGY IN THE NATIONAL CURRICULUM FRAMEWORK (NCF), 2005

The National Curriculum Framework (NCF 2005) is the penultimate one of the five National Curriculum Frameworks published in 1975, 1988, 2000, 2005 and 2009 by the NCERT. The document provides the framework for making syllabi, textbooks and teaching practices making use of the educational technology within the school education programmes in India.

1.4 SMART CLASS ROOMS

Class room teaching and learning has become synonymous with the concept of smart class room. There is great transition from conventional methods of teaching and learning to newer methods. The idea of smart class rooms, are of a recent origin. There are well developed e-learning materials now a day available, which substitute the textual knowledge. Every school subject has well prepared audio-visual lessons of different kinds. Among these lessons there are also modules which are interactive in nature. Advantages of these types of lessons are they are very user-friendly, allows the student to progress at his or her own pace. The learning through smart classes is very popular now days. There is marked difference noticed in the performance of students learning through smart classes. The basic requirement for a smart class room is a computer, an LCD projector and a screen (now a day’s interactive boards or screens are also used). Some LCD projectors of recent origin do not even require a board or screen.
for projection. Ordinary walls of class rooms could become interactive or touch screen boards. Unaccompanied Learners who lack opportunities and facilities are given an opportunity by the investigator to improve their quality of learning and observe the differences in their performances.

1.4.1 MULTIMEDIA IN SMART CLASS ROOMS

Smart class rooms require modern Educational Technology. If technology is not applied to smart class rooms then it cannot be called a smart class room. Application of technology in the class rooms can be in different forms. The most common technological application is in the form of multimedia. In schools these days there are multimedia packages to teach different subjects. This makes the smart class rooms very attractive for children to learn creatively.

1.4.2 LEARNING THROUGH MULTIMEDIA

Educational technology has become an important part of society today. Learning through Multimedia is a significant component of educational technology. Modern educational technology includes (and is broadly synonymous with) e-learning, instructional technology, information and communication technology (ICT) in education, EdTech, learning technology, multimedia learning, technology-enhanced learning (TEL), computer-based instruction (CBI), computer managed instruction, computer-based training (CBT), computer-assisted instruction or computer-aided instruction (CAI), internet-based training (IBT), flexible learning, web-based training (WBT), online education, virtual education, personal learning environments, networked learning, virtual learning environments (VLE) (which are also called learning platforms), m-learning, and digital education.
Multimedia has become a focus of research in educational delivery, learning and its assessment. Many advantages and disadvantages are pointed out in the past. As such, more research needs to be done to identify the extent to which the structuring of multimedia in education delivery at various levels has incorporated the theories of education from the standpoint of curriculum and learning. Because ‘overestimating the speed of diffusion of an innovation and underestimating its eventual consequences and side effects’ are the most common mistakes made in evaluating the effectiveness of new technologies in education.

The search for educational effectiveness has always been a primary objective for the educators and trainers. We cannot make something out of nothing. In order to achieve educational effectiveness, it is important for the educators to adopt an effective teaching method with the assistance of advanced technology that suites the individual's learning style. Learners of the present days tend to demand more knowledge and are becoming more innovative.

Multimedia computer based training and learning including hypermedia technology has been an area of research for the educational experts. There are different courseware designed for teaching and learning and they have been proven effective in accelerating the process of learning. The conventional way of teaching and learning is empowered with the advent of multimedia technology. Multimedia technology also enriches the content of computer based education by providing media rich study materials for students. Furthermore, it changes the way that the end users are interacting with computer systems. Experiences of the researchers in evaluating the quality of learning from hypermedia documents have been highly positive and it has been established that some of the positive attitude is due to the novelty of the medium.
One of the factors determining the educational effectiveness is how educators communicate their conceptual knowledge to the learners. Traditionally, text is used as the basic medium for delivering knowledge and information to the intended learners.

This might be adequate in some context, but might not be true in another. There are situations when knowledge and concepts cannot be expressed by words alone and hence only text based environment is inadequate for effective learning. The process of knowledge acquisition can be more effective if the learners can experience an event through computer simulation incorporating multimedia in a seamless way. Multimedia technology empowers the teaching and learning process. It allows educators to include multiple media into the teaching materials and makes the study more interesting or even more motivated. It improves the quality of education as well as the interaction between teachers and the students. Furthermore, it encourages and enhances peer learning as well as individual creativity and innovation.

Traditional methods of teaching and learning are replaced by modern methods of teaching. We cannot downplay the role of the traditional methods at the same time because it has its own advantages to learning. We notice that there are many modern innovative methods of learning. Educational Technology has come up with many innovative ways of learning which accelerates the learning among students. Students get actively involved in the process of learning. MMLP is one of such effective methods of learning. Often these packages are interactive in nature. It utilizes a method which is a combination of audio, video, graphics, animations etc. The investigator made use of one such professionally prepared MMLP to teach the target group Unaccompanied Learners.
1.4.3 ROLE AND APPLICATION OF MULTIMEDIA IN THE EDUCATIONAL CONTEXT

In the conventional education framework, as shown in the figure below, consists of two main entities: Educator and Learner. The communication between these two entities is basically a one way process.

![Figure 1.1: The conventional education framework](image)

Educator normally plays the role as information provider who delivers conceptual knowledge to the learners. Learner is the receiver of this knowledge, but how and how much they could really absorb is merely answered. There is no mechanism to effectively aid the learner to process and comprehend these abundant information and knowledge. The effectiveness of the education in this setting is questionable. Multimedia has the capability to empower the constructivist approach for learning through collaborations, self-explorations, simulations, models and creating media rich study materials. Pictures, video and sounds are incorporated in a structured manner facilitating the learning of new knowledge much more effectively. The interactive nature of multimedia can also provide the learners more flexibility to adapt to their own learning strategies. It enables both the educators and learners to work together in an informal setting. The role of educators and learners are extended. The figure below demonstrates our view of multimedia courseware as a communication channel between teachers and students which re-engages and accelerates the education process.
Computer based multimedia courseware has rewired the education process by giving the students opportunity to demonstrate their understanding and idea. With multimedia computer tools, such as media editors, the learners can engage in more creative work encouraging innovations. The interactive visual representations enable students to communicate their ideas more effectively in an informative manner. The educators can learn the instructional needs of intending learners and thus the new understanding of a subject might also be discovered.

THE APPLICATION OF MULTIMEDIA TECHNOLOGY IN EDUCATION

Multimedia technology plays an important role in the education and training process because of its ability to provide a virtual environment for learners to effectively acquire knowledge. With sound and visual effects, multimedia enhances the computer simulation of the real life events. It has the potential to transform the classroom from a physical world to an unlimited imaginary virtual environment. Multimedia simulations can instantly put the learners in an environment where they can discover, explore more knowledge actively. Visual and audio can powerfully affect the learners processing of information.

There is no doubt about the advantages that multimedia technology can be used as a powerful tool to assist educators to achieve educational effectiveness. It has been illustrated in this paper that adopting multimedia technology in education has made it
possible to achieve effective teaching and training in multiple domains which was not possible in the traditional text based environment. Incorporating multimedia technology in a dynamic system with good quality materials for students to access, it is now possible to develop effective new teaching and learning strategies. The optimal use of multimedia technology in education and its full potential will only be realised if it is to be adopted not only as a vehicle for knowledge "delivery", but most importantly as an instructional tool. Though creating a good multimedia educational tool has high cost involving the time and effort of the author, the reason for developing these applications is to improve the quality of learning. The multimedia technology as a whole has not yet reached its mature stage. There are still many inhabited problems needed to be solved before educators can make even better use of it and thus beneficial to the learners. The cost effectiveness of multimedia cannot be achieved in the short term. As such portability, maintenance and quality assurance issues need to be considered seriously even with extra investments to make the project long term economic. Organisations should formulate a long term plan for the adoption of multimedia technology in their educational context so that its full potential can be realised.

1.4.4 PREPARATION OF MULTIMEDIA EDUCATIONAL TOOLS

The creation of Multimedia Computer Assisted Teaching (MCAT) or Multimedia Computer Assisted Learning (MCAL) has four main stages. These stages are initial design, developing, delivery and maintenance, as shown in the figure below. All these four stages form an on-going cycle of process.
The initial design stage involves the gathering of ideas, requirement, identification all necessary elements of course materials, and feasibility studies, which states the suitability of the product to the existing teaching and learning methods. In the developing stage, creators of the product proceed with all necessary resources. At the delivery stage, we are concerned about how the MCAT/MCAL material can be delivered more cost effectively (such approach might be through Internet or CD-ROM or a combination of both). The fourth stage is an on-going process of maintenance. In this process, the users and developers will be continuously updating the content and improving the functionality of the MCAT/MCAL system. The users play an important role in all the four stages of CAT/MCAL creation.

1.4.5 CHARACTERISTICS OF MULTIMEDIA APPLICATIONS

We have identified four main characteristics to be incorporated in the multimedia educational materials, namely: Interactivity, Collaboration, Self-exploration and Encourage Innovation as shown in the figure below.
1.4.5.1 INTERACTIVITY

MCAT/MCAL tools shall not just "deliver" information to the learners, but also enable interactive learning. Educators and learners should be capable of getting immediate responses of their actions during the process of knowledge seeking and exploration.

1.4.5.2 COLLABORATION

Multimedia education tool shall provide environment for collaboration among the intended users, both learners and educators. Simultaneous access to multimedia resources (i.e. video clip, audio segment, picture, etc.) by multiple users is essential for collaborated learning and teaching.

1.4.5.3 SELF-EXPLORATION

In general, different people have different capacities of sense making. This is due to our different sense making training. Thus when people process the same piece of information, they will apply their unique way of sense making methods. One of the recommended learning methods is self-exploration. Through self-exploration of knowledge, new understandings of a subject can be constructed more effectively. This has specific benefits to students who find the conventional way of education insufficient.
for their learning. The introduction of multimedia technology as an instructional tool allows the educators to "deliver" knowledge more dynamically through media rich course materials, and hence encourages the students to learn more effectively by matching their diverse learning patterns and instructional needs.

1.4.5.4 ENCOURAGE INNOVATION

The MCAT/MCAL should allow learners to express their understanding to a specific subject of knowledge innovatively and dynamically. This also encourages the learners to participate in the learning process positively while they are gaining more confidence in manipulating course materials and are able to create something that their peers might not be able to do, thus allowing other learners and educators to explore the knowledge of a domain in many dimensions.

1.4.6 CATEGORIES OF MULTIMEDIA APPLICATIONS

Generally speaking, these MCAT/MCAL applications can be categorised into the three major domains as shown in the figure below.

![Figure1.5: The application domains of MCAT/MCAL](image)

Figure1.5: The application domains of MCAT/MCAL
1.4.6.1 SPECIAL Education Domain

Computerised multimedia based educational tools (MCAT/MCAL) are increasingly used in the special education domains. Such systems allow people with visual disabilities, who cannot read textual or graphical information, to access audio information through the audio aids while people with hearing disability can learn more effectively through visual presentation of multimedia information. Multimedia also helps learning disabled or attention deficit learners to participate better in the learning process. Other applications of MCAT/MCAL are for facilitating learning, enhancing social interaction and to help building self-esteem among those students with behavioural and emotional difficulties. Learners are able to express themselves with the aids of these tools.

1.4.6.2 GENERAL INTEREST AND KNOWLEDGE DOMAIN

There is a wide range of different applications for these specific domains, such as language learning, history, scientific knowledge, stories, etc.

1.4.6.3 THE ACADEMIC AND PROFESSIONAL DOMAIN

It includes subject specific multimedia courseware and computer simulation for laboratory experiments. The system empowers the students' learning process by allowing them to communicate with the teachers and peers electronically through HTML forms.

1.4.7 PROBLEMS AND ISSUES OF USING MULTIMEDIA APPLICATIONS

The use of multimedia technology in the educational environment has not yet reached its mature stage. We have identified some of the factors that require attention towards
successful realisation of MCAT/MCAL within an organisation. Thus, it explains the current state of multimedia technology in educational domain. The three major factors are Organisational, Technological and Human as shown in the figure below.

Figure 1.6: Factors contributed to successful MCAT/MCAL

1.4.7.1 ORGANISATIONAL FACTORS

Without a well formulated plan for adopting this new technology, conflicts are likely to occur within an organisation, and thus become a limitation and hinder the realisation of multimedia in education. Rapid changes are brought to the organisations because of the transition from the traditional text based teaching modes to a new style of computerised multimedia instruction. Resistance to changes is a natural phenomenon of human being. Resistance will occur while the benefits of the change are not justifiable to the cost. The cost of adopting multimedia technology as an educational tool is still expensive in the present day. An extra overhead will be added to the educational expenses in the process of acquiring hardware and software equipment. The creation and delivery of multimedia instructional tools as well as training and maintenance are time consuming and costly process. Development of multimedia study materials requires intensive input of time and effort from the educators. Lack of time and qualified personnel to develop quality MCAT/MCAL causes limitations to provide interesting and innovative materials to the
students. Hiring professional multimedia developers requires a substantial cost. The cost of developing multimedia courseware could be too expensive as it may require people with different skills in creating meaningful multimedia presentation and instructional packages. The educational organisation might not be willing to invest for the multimedia technology since it still remained unjustifiable that multimedia will reduce the cost of education. There is also a lack of sufficient incentive and rewards towards the contribution to the multimedia materials development.

1.4.7.2 TECHNOLOGICAL FACTORS

A lack of standardised tools, system development methodologies and platform standards have all contributed to slow integration for multimedia CAT/CAL materials development. The multimedia enabled software and hardware are still expensive. Most of the multimedia authoring tools do not allow the end products to be interchanged with other tools. This posts a disadvantage on the sharing and exchanging study materials among courseware developers. The lack of standardised multimedia system development methods and data formats result in the incompatibility among multimedia educational systems. Different vendors have their own commercial interests and supporting various types of methodologies. As a matter of fact, most of the multimedia application systems do not directly communicate with one the other unless they are developed under the same company. Therefore, there is a need to have a convergence for the multimedia application development methods as well as the various types of media formats and standards. Although multimedia technology has made many ways of teaching and training possible and with the aids of multimedia instructional tools the learners are able to learn faster through audio and visual simulations, but there are still things that currently available multimedia technology cannot do. The conventional face
to face in person teaching method still has advantages over the high tech ones. The availability of MCAT/MCAL comes down to whether the users have access to the multimedia equipped computers and other associated resources such as connection to the Internet.

1.4.7.3 HUMAN FACTORS

There is a lack of experience of educators in manipulating multimedia computer based instructional tools. Most educators do not have sufficient computing knowledge, training and skills in graphic design, computer programming and authoring multimedia courseware. Educators will need to be retrained in order to have better result of adapting to the new technology. Furthermore, problems might occur as a result of the difference in abilities of individuals to learn a new skill. Substantial time efforts might be needed for the educators to learn and manipulate these new technologies. It might not be an easy task for aged teachers. There is also a lack of sufficient time for the educators within a teaching institution to participate in the creation of multimedia courseware development where the workload for their teaching is already high enough. Organisations therefore need to formulate a strategy to assist this group of educators to cooperate with the new style of teaching. Another issue is to justify about how people can learn best. It is difficult to develop a corporate interactive multimedia environment for learning which will fulfil everybody's educational needs.

1.4.8 MULTIMEDIA LEARNING PACKAGE (MMLP)

Educational technology has advanced and the growth of such technologies has brought about tremendous changes in the area of education. Development of technology has ushered in different ways of learning using technology. One of such technological
development is the E- Learning modules. These modules are often in the form of multimedia packages. These multimedia packages are interactive in nature.

1.4.8.1 MULTIMEDIA LEARNING IN THE TECHNOLOGY ERA

We are living in the Technological Era were in every aspect of the life is influenced by technology. In the same way the education field also faces the changes in teaching methodology and in other areas. To cater to the changing needs of the society, different methods of teaching emerged. One among them is Multimedia Learning Package which is currently used in most schools. Multimedia learning is part of E-learning. For the preparation Multimedia module planning is the most important phase. In this phase target, content, reference, type of computer, technical support, software and finance factors were analysed.

a) **Target Analysis:** It was essential to consider the level of the learners, the entry behaviour required, age, computer literacy, disabilities, cultural background and the knowledge of using E- learning modules.

b) **Content Analysis and presentation:** On the basis of expert opinions the investigator chose one prose and one poem from X Standard English text book prescribed by the Government of Karnataka for the State board. In order to give the best presentation possible, the investigator incorporated still pictures, animations, video, video-texts, hyper-text, narration, graphics and quizzes.

c) **Reference:** The abstract terms should be defined in a simple and meaningful way. In the present study, provision was made to explain the meanings of the difficult words in the courseware.
d) **Type of computer:** The type of computer utilized for the newly developed E-learning modules in Environmental Science was identified and the investigator used the dell computer.

e) **Technical Support:** For the development of the multimedia courseware for teaching English, the support of expert persons in the field of computer science with knowledge in **flash** and **Net** was sought. The investigator also consulted the teachers possessing more than 15 years of experience in teaching English at the secondary level. Being an experienced English teacher, the investigator acted as the instructional designer for the preparation of Multimedia learning package for teaching English.

f) **Finance:** Investment is one of the basic criteria for the development of any kind of E-Learning courseware. Out of his funds, the investigator developed the E-learning module in English for the Unaccompanied Learners.

g) **Software Analysis:** Based on the consultation with Software Engineers and Technical Assistants, the most suitable software was chosen to develop the Multimedia learning package. The software satisfied the conditions and the suggestions given by the experts. The sub areas of the software are

- Articulate story line.
- Flash and Adobe Photo Shop
- Cool Edit Pro (Voice Edition).

**1.4.8.2 DESIGNING**

This phase consists of framing the objectives, programme design and the activities for the interaction of the learner, which was meticulously taken care of by the investigator.
a) FRAMING OBJECTIVES

Framing objectives for the Multimedia package in English was an important step. All the objectives had to be in behavioural and measurable terms. The module framework created must be in congruence with the objectives of the E-learning module in general. The components of E-learning module in each module were then divided into four categories

- Learning objectives,
- Subject contents,
- Learning activities
- Assessment.

b) PROGRAMME DESIGN

Programmed instruction is an innovative method in individualized instruction. The basic five principles of programmed learning are small step, active response, and immediate reinforcement, self-pacing and self-testing. The learners are given immediate feedback to their responses when the learner gives right response, automatically they go for the next unit according to their interest.

1.4.8.3 DEVELOPING

Based on meticulous planning, Multimedia learning package was developed phase-wise. The phases are

a) FLOW CHARTING

The learner who operates the Multimedia package through the CD-based lesson becomes expert as they master the content as well as technology. Before starting
production, a well-established flow chart is essential. The Multimedia package starts with a title screen and then moves to the introductory slide explaining in brief the content of the Multimedia package. It will then take the learner to the main menu for the poem and the prose. Both the poem and the prose menu will take the learner to the slide explaining the objectives of the lessons. It will then take the learner to the content of each of those lessons. There are other icons like home, next, back, sound which give direction for other options.

b) CONTENT ACCURACY

Content accuracy is indispensable for the development of E-learning modules in any subject. Script writing, narration, graphics and animation are based on the content. The content was taken from the X standard English text book prescribed by the Government of Karnataka for the State board. Accuracy has been established for the newly developed Multimedia package in English.

c) SCRIPTING

The lessons were developed with good scripting. This was possible by the investigator with the help of English language experts and software technical assistance. It has been found that the content included in the text was accurately scripted.

d) STORY BOARDING

A story board is simply a hand-drawn visualization of every scene that will be shot. It combines the information from the script and flow charts into a visual hard copy. In the story board it is difficult to maintain visual and narrative continuity from one scene to the next. In the present study the investigator has drawn the story board, and it was given to the technical experts for making the story board flawless.
e) TEXT

In the newly developed Multimedia learning package the text is kept concise, informative and interesting so as to convey meaning and full information to the learner. In some places presentation of the text is done through animation. A variety of methods are used to animate the text.

f) GRAPHICS AND ANIMATION

Graphics and animation are the highlights of the Multimedia learning package. Static objects cannot capture attention and sustain interest always. But it is possible with graphics and animated images. In the present Multimedia Learning Package development more graphics and animation are used in order to give more accurate knowledge and experience.

g) AUDIO AND VIDEO

Among the five senses listening plays a vital role in the teaching and learning. So it was realized that textual message has to be supplemented with audio features. The audio file is included in appropriate places, wherever it is necessary. Video is a powerful communication tool. The video files containing both sound and moving pictures take up a lot of space, and hence, the investigator used short video clip in the Multimedia Learning Package.

1.4.8.4 IMPLEMENTATION

Multimedia Learning Package was given to a group of ten Unaccompanied Learners to test its technological effectiveness. Due weightage was given to the students’ responses, in an attempt to make the package user-friendly for the learners.
1.4.8.5 EVALUATION

Evaluation of the Multimedia Learning Package in English was done in two ways, one was at the level of content and other was with technology employed. In the present investigation, once the entire content of the programme was developed, a test CD-ROM was created. This CD-ROM was submitted to two content specialists for feedback and evaluation. The experts gave suggestions regarding the Multimedia Learning Package. The comments and suggestions given by the experts were incorporated into the content of the Multimedia Learning Package. The CD-ROM was thus tested for content accuracy, ease of use and appeal. A time limit was set for this evaluation phase.

The Multimedia Learning Package was checked to ensure the relevance of the material, style, vocabulary and content. Ambiguities, obscurities and other inadequacies were thoroughly viewed before it was presented to the students.

1.4.8.6 VALIDATION OF MULTIMEDIA LEARNING PACKAGE IN ENGLISH

Validity refers to truthfulness or degree of consistency or truthfulness. In the present study the developed Multimedia Learning Package was validated by Preliminary Try-outs, Expert validation and validation from Individual and Group of students.

1.4.8.6.1 PRELIMINARY TRY-OUT

Try-out is an essential process of validation; it helps in refining the Package and makes it relevant to the target population. In the preliminary try-out, the investigator met ten of the target group Unaccompanied Learners, one by one. This gave an opportunity to the investigator to study the feedback of the learners with reference to the content presented. So, on the basis of the preliminary try out, necessary corrections, modifications, additions, deletion and refinements were made. After the editing, the lessons were ready for Expert Validation.
a) GROUP TRY-OUT

After modifying the Multimedia Learning Package, it was given to a group of ten students of X standard Unaccompanied Learners of the target group. Care was taken that each student could access a separate computer system. They were trained to use Multimedia Learning Package. The students studied all the chapters (a poem and a prose) through Multimedia Learning Package. The investigator collected the students’ reactions towards usage of Multimedia Learning Package. Common errors were noted down and the errors were corrected frame wise.

b) INDIVIDUAL TRY-OUT

The developed Multimedia Learning Package was given to one X standard student of the target group Unaccompanied Learners, he learnt the 2 units of English using the Multimedia Learning Package. He was given 40 minutes per day and altogether he used the module for 10 days, he expressed his views regarding the difficulties. Later from his point of view modification was carried out in some frames of the package. The module was found to be effective in bringing mastery learning English.

c) EXPERT’S VALIDATION

The Multimedia Learning Package was given in CD to a subject expert for their opinion and comments. They gave few suggestions regarding the Package. On the basis of the expert’s opinions, the final draft of the Multimedia Learning Package was developed and applied to the experimental group.
1.4.8.6.2 MINIMUM SYSTEM REQUIREMENTS TO ACCESS THE MULTIMEDIA LEARNING PACKAGE

The following are the minimum system requirements for the installation and execution of the Multimedia Learning Package.

- Microsoft Windows 2000-2008, Microsoft Windows XP, MS Windows and Vista
- 512 MB RAM is essential.
- Pentium IV is required.
- Adobe Flash Player.

1.4.9 APPLICATION OF MMLP IN LANGUAGE LEARNING

The conventional audio-visual learning aids are used commonly in the teaching learning process. These learning aids would not be of great help to all types of students, viz average or below average or above average level of learning. Weak learners particularly would require alternative learning assistance such as multimedia packages to aid them in their learning process.

One of the great educational advantages of multimedia learning package is that the learners can be taught even the most difficult subject matter or content otherwise beyond comprehension through conventional methods. It creates a dynamic and interactive environment for learning. Interactive multimedia has the potential to create high quality learning environments which actively engage the learner, thereby promoting quality learning, to the maximum extent possible by the learner.
1.5 MULTIMEDIA LEARNING THEORIES

The famous inventor Thomas Edison said that the motion picture will revolutionize the world, especially our educational system and replace the text books. But it has not become a reality. In 1970 Computer Assisted Instruction (CAI) programs expected to wave the future of education just remained a teacher-based mode of instruction. But the claims being made for the potential of multimedia learning environments are taking great strides in the field of education.

Effective use of new instructional technology must be guided by a research-based theory of how students learn. It is the Cognitive psychology which provides the starting point for such theories. One of the most important avenues of cognitive psychology is to understand how technology- such as multimedia can be used to foster student learning. Before venturing into the research proper it is important to look into some of the significant theories that would form a firm foundation for the same. Hence the following theories require justifiable consideration and interpretation.

1.5.1 MULTIMODAL THEORIES

Under this category there are 3 theories. They are Allan Paivio’s Dual Coding Theory, Johannes Engelkamp’s Multimodal theory, and Baddeley’s Working Memory Model.

Given below is the description of each of these theories.

1.5.1.1 ALLAN PAIVIO’S DUAL CODING THEORY

Dual Coding Theory (DCT) is by Allan Paivio (Canada). This theory requires the attention as a background to this research. It is a theory of cognition. The underlying
assumptions of DCT concern basic mental structures and processes: the structures are associative networks of verbal and imaginal representations, and the processes concern the development and activation of those structures.

This theory postulates that mind stores information in two different forms. It stores information in audio and image forms. Our brain features two short term channels. One is the visual channel and the other is for verbal information. Information is stored on each of these channels before being passed over to long term memory. However neither of these short term channels have infinite storage. Like any storage device they get full. Hence this information is passed on to a long term memory in the brain. Thus instead of storing the information in the separate areas of the brain it can share the load across the audio and visual channels.

The theory demonstrates that concreteness, imagery, and verbal associative processes play major roles in various educational domains: the representation and comprehension of knowledge, learning and memory of school material, effective instruction, individual differences, achievement motivation and test anxiety, and the learning of motor skills. DCT also has important implications for educational research. We show not only that DCT provides a unified explanation for diverse topics in education, but also that its mechanistic frame work accommodates theories cast in terms of strategies and other high-level psychological processes. DCT is an empirically well founded characterization of the mental processes that underlie human behaviour and experience especially in the area of learning through multimedia.

DCT’s other structural assumptions concern the connections that link verbal and nonverbal representations into a complex associative network. Links between the two systems are called referential connections. They join corresponding verbal and imaginal
codes and potentially allow such operations as imaging to words and naming to pictures. A second kind of link, called associative connections in DCT, joins representations within the verbal and nonverbal systems. On the verbal side, words are joined to other related words. Within the nonverbal system, associative connections join images to other images in either the same or different sensory modalities.

The development and activation of verbal and imaginal associative structures are governed by DCT’s processing assumptions. A basic premise is that individual verbal and imaginal representations vary in their activity levels, with some representations highly active and others depressed at any given time. Strong activity may be associated with conscious nonverbal and verbal experiences.

According to DCT, the relative activation of the nonverbal system is particularly important for understanding human behaviour because the imagery system has unique theoretical and empirical properties. A second important determinant of imagery processing is the imagery value or concreteness of the material being studied. Theoretically, imagery and concreteness reflect the availability and strength of word-to-image referential connections. A third factor affecting nonverbal processing is variation among people in the tendency and capacity to use imagery; that is, individual differences. Some students and teachers will use imagery easily and spontaneously under many conditions, whereas others will rarely image and only with difficulty. These individual differences in imagery abilities and habits have important consequences for education. Students who have trouble imaging, for example, may fail to remember passages of text that benefit from imaginal processing.

The successful transmission of new skills and knowledge depends on student learning and memory processes that have received much attention from educational and
cognitive researchers. From a DCT perspective, learning and remembering involve the same imagery and associative processes.

The research demonstrating that imagery and concreteness play central roles in the representation and acquisition of knowledge is directly relevant to instructional practices. The positive effects of concreteness and imagery on the readability of texts and on memory, for example, generalize to oral transmission of information in the classroom. That is, lessons containing concrete information and evoking vivid images will be easier to comprehend and remember than lessons that are abstract and not image-arousing. Moreover, the same imagery manipulations that benefit memory for text should also benefit memory for orally presented information as in classroom lessons.

Theoretically, DCT suggests that visual illustrations, the use of concrete and personal examples, and related teaching behaviours help comprehension and retention of lessons by activating concrete referents and increasing the arousal of mental images in students.

Thus it is possible to say that this theory has practical implications for the research in the sense that our visual and auditory senses do play a great role in learning. Multimedia learning almost always has these two elements combined, so is the case with the multimedia learning package the researcher has prepared.

1.5.1.2 BADDELEY’S WORKING MEMORY MODEL

In an attempt to explain a more accurate model of short-term memory, Baddeley (UK) comes up with this Working Memory Model. Here the model encompasses a central executive, which acts as supervisory system and controls the flow of information from and to its slave systems (two unimodal storage systems): phonological loop and
visuospatial sketchpad. The slave systems are short-term storage systems dedicated to a content domain verbal and visuo-spatial.

In 2001 a further component (a third slave system) a multimodal store was added to his model capable of integrating information into unitary episodic representations termed episodic buffer.

1.5.1.3 JOHANNES ENGELKAMP’S MULTIMODAL THEORY

Multimodal theory is by Johannes Engelkamp (NetherLands). The central idea of this model is that human information processing is to a certain extent decentralized, and that episodic memory performance depends not only on central information processing, but also on which systems are actually involved in the encoding and retrieval of the material itself.

Paivio and Baddeley focussed on the interplay between words pictures. But they have not incorporated actions into their designs. In instructions, actions have a great role to play. But it has been understudied and now the cognitive scientists are showing great interest in this area.

The typical experiment consisted of presenting participants with a list of 12 to 48 action phrases such as “nod your head” or “bend the wire” followed by the free recall of the phrases. The verbal task consisted of simply listening to the phrases and the self-performed task consisted of acting out the phrases using either imaginary or actual objects. The superiority of enactment was observed for many different conditions such as short versus long lists, pure versus mixed lists, and real versus imaginary objects.
1.5.2 INSTRUCTIONAL THEORIES

The theories proposed by Paivio, Baddeley, and Engelkamp have implications for instruction. For example, Baddeley’s assumption that working memory has a limited capacity is important for multimedia learning and other forms of instruction. The instructional implications of a limited-capacity working memory have been developed in Sweller’s (1988, 1994, 2003) cognitive load theory.

1.5.2.1 SWELLER’S COGNITIVE LOAD THEORY

Cognitive load theory began with Sweller (Australia). Obviously he was building up this theory on the works of his other predecessors. This theory visualises how our memory works. There are two types of memory—short term memory and long term memory. Short term memory is known as the working memory. This short term memory has to process the incoming information before it can be stored by long term memory. The short term memory is limited in its capacity to selectively attend to and process incoming sensory data. It is presented with too much information. Simultaneously portions of that information will not make it into long term memory. This is called cognitive load theory.

There are three types of cognitive load in short memory or working memory and they have high capacity. They are Intrinsic load memory, Extraneous load memory and Germane load memory. We will now discuss what each of these loads means.

Intrinsic load memory: Intrinsic load memory is related to the complexity of the information the person is paying attention to and processing that information. It has got to do with interactive elements. There is great difficulty in learning the material at hand. For instance an example of a person paying attention to a new learning course can be considered. The lecture talks about and demonstrates a very complex conceptual matter
in many pieces. This is going to place a very high intrinsic load on the person’s visual working memory.

Extraneous load memory: Extraneous load is essentially a load on the working memory that is completely unrelated to the learning task. So it is a distraction from the learning process. It is something that is going on in the environment that distracts your attention from what you are trying to learn. It could be something in the learning material itself. It could be something in the environment but something that distracts you.

Germane load memory: Germane load memory is a mental processing effort that is going directly towards or supporting the development of schema and long term memory. This shows how focussed a person is. So this is actually the mental effort creating connections to existing knowledge or creating connection between novel information. The activities that facilitate these are scaffolding, sequencing and rehearsing.

Finally it could be said that the goal of a teacher is to minimise intrinsic load and extraneous load and maximise the germane load of short term memory. This is because the object of a teacher is to help the learner, create new connections between ideas and store the information in long term memory.

1.5.2.2 R.E.MAYER’S COGNITIVE THEORY AND PRINCIPLES OF MULTIMEDIA LEARNING (CTML)

This research has a good base on the most important theory of multimedia learning by R.E. Mayer- Cognitive Theory of Multimedia Learning (CTML).

Unlike Paivio, Baddeley,and Sweller, Mayer developed a theory specifically for multimedia learning. But these previously discussed theories form the foundation for his
contribution. Mayer borrows from Paivio the proposal that information can be encoded by using either a verbal or visual code. He borrows from Baddeley the idea of a limited-capacity working memory that can be managed by an executive process. He adopts Sweller’s distinction between extraneous and intrinsic cognitive load, and proposes the goal of devising ways to reduce extraneous cognitive load.

There are 3 Cognitive Processes of Multimedia Learning. The first principle is selecting. Selecting is a process that is applied to incoming visual and auditory information to provide a text and image base. The second principle is organising. Organising is the process that is applied to text base and image base to form a to be explained model. The third principle is integrating. Integrating occurs when the learner builds connections between the events in the verbal and visual model.

1.5.2.2.1 PRINCIPLES OF MULTIMEDIA LEARNING

Richard E Mayer says that retention and transfer effects result from multimedia when the principles below are adhered to. These principles stem from cognitive science’s understanding of the limitations of working memory by Baddeley and methods for encoding into long-term memory.

1. Coherence Principle – People learn better when extraneous words, pictures and sounds are excluded rather than included. 2. Signalling Principle – People learn better when cues that highlight the organization of the essential material are added. 3. Redundancy Principle – People learn better from graphics and narration than from graphics, narration and on-screen text. 4. Spatial Contiguity Principle – People learn better when corresponding words and pictures are presented near rather than far from each other on the page or screen. 5. Temporal Contiguity Principle – People learn better when corresponding words and pictures are presented simultaneously rather than
successively. 6. Segmenting Principle – People learn better from a multimedia lesson is presented in user-paced segments rather than as a continuous unit. 7. Pre-training Principle – People learn better from a multimedia lesson when they know the names and characteristics of the main concepts. 8. Modality Principle – People learn better from graphics and narrations than from animation and on-screen text. 9. Multimedia Principle – People learn better from words and pictures than from words alone. 10. Personalization Principle – People learn better from multimedia lessons when words are in conversational style rather than formal style. 11. Voice Principle – People learn better when the narration in multimedia lessons is spoken in a friendly human voice rather than a machine voice. 12. Image Principle – People do not necessarily learn better from a multimedia lesson when the speaker’s image is added to the screen.

1.5.2.3 MITCHELL J NATHAN’S ANIMATE THEORY

The proponent of this theory of multimedia learning is Mitchell J Nathan (America). The purpose of this instruction is to use multimedia to improve students’ ability to formulate equations for algebra word problems.

Here the major theoretic claim is that in order to comprehend a problem the student must make a correspondence between the formal equations and the student’s own informal understanding of the situation described in the problem.

This computer tutoring system ‘animate’ presents results of students’ use of it when solving typical high school and college level algebra word problems. Theory suggests that development of an intelligent tutor is not necessary, as long as the tutoring environment triggers the appropriate reasoning from the student, allowing the student to generate, manipulate and understand abstract, formal expressions. Students learn to
construct a formal problem schema which organises both information given in a problem statement and information inferred by the leader. The information in the problem schema— the values and mathematical relations is in turn used by the tutor to drive a computer animation. The student compares the activity shown on the computer screen to his or her own expectations based on the situation described in the problem story. Errors in specifying the problem schema lead to incorrect animations, the resolution of which is highly constrained by its own relation to the situation. Students ‘debug’ the problem schema until they are satisfied that the appropriate animation appears on the screen. We then derive the appropriate equations from the schema which then can be solved. The system developed may seem unintelligent in the sense that it knows nothing of the specific problems under consideration and has no model of the student’s knowledge base, though it knows about algebra and the conceptual structure of algebra word problems.

When a student makes a problem statement it is regarded as a text from which the student must get situational information and make critical inferences. The student must coordinate this information with known problem schemata so that formal (i.e. algebraic) operations can be applied and exact solutions obtained. The experimental results are described with ‘animate’, an unintelligent tutoring system which knows nothing of the problem at hand or of the student’s actions. Subjects who build animation of situations described in typical word problems consistently outperformed tutor users with no animation and students using only equations in both training tasks and near and distant transfer tasks. Performance differences were greatest for novel problems. We conclude that by providing an environment which gives equations situation-based meaning and makes the ramifications of students’ formal manipulations clear, students learn to relate
formal expressions to the referent situations. This enhances problem comprehension and gives a stronger representational base to the problem solving process.

1.6 DIFFERENT CATEGORIES OF LEARNERS

The learners can be categorised into two groups. The first category of learners can be called learners from home. The next category of learners can be called learners detached from home. An explanation of these categories follows.

1.6.1 LEARNERS FROM HOME

Learners from home means students who have their parents and they attend school as regular students. These students have the support of the family. They have the support of their parents and others at home. These learners do not lack anything. Their learning environment is completely supervised. They are properly guided and followed up by their parents.

1.6.2 CONCEPT OF UNACCOMPANIEDNESS

The second category of learners mentioned above is called the ‘Unaccompanied Learners’ because there is no one really to accompany them in life. Such category of learners ultimately turns on to the street or nature’s bosom for survival.

1.6.3 LEARNERS DETACHED FROM HOME

There are many learners who have also no one to care for. There are many children and adolescents who are at the mercy of nature. They are abandoned by their parents. Some of them run away from home because of family issues between father and mother. Quarrels and fights between father and mother force many children and adolescents to abandon their family. When the parents are in economic crisis and are not able to feed their children, the only option is to turn to the streets for food to satisfy their hunger and
quench their thirst. It is fitting and right that some effort is made to intervene in the lives of such category of learners. Such interventions in the lives of such learners can be of help to them to bring them out of their helplessness. Often in the lives of such learners a small spark is enough to ignite their future which will carry them a long way in life.

1.6.4 GROWING POPULATION OF UNACCOMPANIED LEARNERS RIGHT FROM INFANCY

Growing population of Unaccompanied Learners right from infancy is an alarming reality in our society. This is due to very many reasons. Some of these children are abandoned by the parents due to poverty. They are not able to feed them. Some children who are born due to irresponsibility of the parents are just left on the street to the mercy of nature. Some children pick up some quarrel with the parents and run away from home without their knowledge. Some other children run away from their village just to enjoy life in the cities. Before they realize their mistake, they are in the clutches of antisocial elements that make use of them for their selfish gains.

1.7 NEED AND SIGNIFICANCE OF THE PRESENT STUDY

The children who are abandoned by their parents and guardians do suffer a lot in their life. Yet there is great potential and talent dormant in these Unaccompanied Learners. They seem to be multifaceted on par with any other learner from the normal stream of the society; sometimes they even excel their other counterparts, probably due to the challenging environment in which they grow and are exposed to. It is important that this neglected section of the society be addressed and empowered and that they are guided to come up in the society just like the other normal category of learners. There is a felt need to improve their academic achievement and bring them out from the clutches
of becoming anti-nationals. The present research was an attempt in this direction, by the investigator. The study gains significance as it aims to improve the achievement of the unaccompanied learners by applying MMLP during the process of English language learning.

1.8 EARLIER RESEARCH STUDIES AND THEIR IMPLICATIONS

It is important to have a review of the previous studies done in order to have a clear picture and concept of the topic taken for research. This review is done so that what has been done is not taken up again for further research. Earlier studies also form a wealth of knowledge for the researcher to understand the topic of research from a broader perspective. They are eye-openers to the researcher to understand related issues to the topic under consideration.

1.8.1 RESEARCH GAPS IDENTIFIED

The research gaps are identified by a detailed consideration of the reviews of studies already done. Every research should contribute something new to the already existing information. It will thus contribute something more to the existing wealth of knowledge. A very careful consideration of the review of studies will provide the gaps that are existing in the area of research under consideration. Here the investigator identified the research gap considering the reviews already done and found that the effectiveness of multimedia package for English on Unaccompanied Learners has not been tested so far by any person.
1.9 RESEARCH QUESTIONS

These were the following research questions formulated by the researcher in present study to find the answers:

- Will Multimedia Learning Package in English influence the learner to accomplish their learning process?
- Does E-Learning Module in English help the learners in the enhancement of achievement in the Subject?
- Will the Multimedia Learning Package promote English Achievement Score, and Language Creativity of high school level Unaccompanied Learners?
- Is there relationship among English Achievement and Language Creativity of high school level Unaccompanied Learners, when compared to innovative method of using Multimedia Learning Package in teaching English?

1.10 STATEMENT OF THE RESEARCH PROBLEM

There has been a rapid increase in recent times in the use of Multimedia Learning Package in education. This increase is not only due to the ease of availability, accessibility, low cost of technological resources, but also to the expanding body of research on the role of Multimedia Learning Package in education. In today’s fast growth world, technology has helped education by providing multimedia facilities. Educators know that, rather than having one media in their teaching process, it could be of great use to have multimedia. Thus proper use of E-Learning could stimulate effective learning among the learners.

In this digital age, the development of the interest and presentation on design software, students are being given opportunities to experience and learn in ways that have never before been imaginable. Students learn in various ways that are unique to their own interests and experiences. E-Learning is able to offer quick accessible information and
gives opportunities for graphics and animations can penetrate more and leave permanent learning in the cognitive domain. E-Learning also gives self-motivation to the learners so that they can gain better knowledge with the best style of learning.

It is definitely a fact that revolutionary changes are taking place in ways and means of knowledge dissemination in the present education system. The rapid increase in the availability of computers and internets has made significant changes in the education system. The use of internet technologies to deliver a broad array of solution that enhances knowledge and performance in E-Learning (Rosenberg-2001).

Multimedia Learning Package is a document or program which incorporates a combination of texts, graphics, audio and video. It can be conveniently used to convey well designed information with varying special effects. Multimedia Learning Package is found to be effective in enhancing in environmental education learning because it allows the complication of immense amount of text illustrations, audio and video. In this study the investigator is comparing the conventional method with Multimedia Learning Package method. So it will be beneficial to the teachers, the students and the educational institutions.

The research problem is stated as “Effectiveness of MMLP in learning English: A Study among the unaccompanied learners.” Due to lack of parental guidance, the Unaccompanied Learners do not perform well in their academic achievement. Hence the researcher chose this area of study with an aim to improve their performance on par with the other accompanied learners.
1.10.1 OPERATIONAL DEFINITIONS OF KEY TERMS

a. **Effectiveness**: The term refers to the influence and impact that is brought about by means of using MMLP during the learning of English.

b. **Unaccompanied Learners**: Children who dwell on the streets without the due care and guidance of their parents or guardians.

c. **MMLP**: Multimedia Learning Package is a professionally prepared study material using Electronic Technology, with audio and video components.

d. **English Language Learning**: English being the foreign language, it is also the second language in Karnataka and becomes the medium of instruction by choice.

1.11 OBJECTIVES OF THE STUDY

The following were the objectives of the study: They were to

- Find out the significant difference in achievement in English in the pre-test, between the boys and girls of the Experimental group Unaccompanied Learners.
- Find out the significant difference in achievement in English in the post-test of the Experimental group.
- Find out the significant difference in achievement in English in the pre-test of the Control group
- Find out the significant difference in achievement in English in the post-test of the Control group
- Find out the significant difference in achievement in English in the pre-test and post-test of the Experimental group taught through MMLP
- Find out the significant difference in achievement in English in the pre-test and post-test of the Control group, taught through traditional method
• find out the significant difference in achievement in English in the pre-test of Control and Experimental groups
• find out the significant difference in achievement in English in the post-test of Control and Experimental groups
• identify the difference between the conventional method of teaching and teaching innovatively using MMLP
• find out the creativity of the Unaccompanied Learners in English

1.12 HYPOTHESES OF THE STUDY

The following were the hypotheses proposed in the initial phase of the research based on certain research questions to give a specific direction to the study.

1. There is no significant difference between male and female Unaccompanied Learners of Control group taught through conventional method in Language Creativity score in the pre-test.

2. There is no significant difference between male and female Unaccompanied Learners of Control group taught through conventional method in Language Creativity score in the post-test.

3. There is no significant difference between male and female Unaccompanied Learners of Control group taught through conventional method in English Achievement score in the pre-test.

4. There is no significant difference between male and female Unaccompanied Learners of Control group taught through conventional method in English Achievement score in the post-test.

5. There is no significant difference between male and female Unaccompanied Learners of Experimental group taught through innovative method using Multimedia Learning Package in Language Creativity score in the pre-test.

6. There is no significant difference between male and female Unaccompanied Learners of Experimental group taught through innovative method using Multimedia Learning Package in Language Creativity score in the post-test.
7. There is no significant difference between male and female Unaccompanied Learners of Experimental group taught through innovative method using Multimedia Learning Package in English Achievement score in the pre-test.

8. There is no significant difference between male and female Unaccompanied Learners of Experimental group taught through innovative method using Multimedia Learning Package in English Achievement score in the post-test.

9. There is no significant difference between the Control group taught through Conventional method and Experimental group taught through innovative method using Multimedia Learning Package in Language Creativity score in the pre-test.

10. There is no significant difference between the Pre-test and the Post-test in Language Creativity scores of the Control group taught through Conventional method among the Unaccompanied Learners at high school level.

11. There is no significant difference between the Control group taught through Conventional method and Experimental group taught through innovative method using Multimedia Learning Package in Language Creativity score in the post-test.

12. There is no significant difference between the Pre-test and the Post-test in Language Creativity scores of the Experimental group taught through innovative method using Multimedia Learning Package among the Unaccompanied Learners at high school level.

13. There is no significant difference between the Control group taught through Conventional method and Experimental group taught through innovative method using Multimedia Learning Package in English Achievement score in the pre-test.

14. There is no significant difference between the Pre-test and the Post-test in English Achievement scores of the Control group taught through Conventional method among the Unaccompanied Learners at high school level.

15. There is no significant difference between the Control group taught through Conventional method and Experimental group taught through innovative method using Multimedia Learning Package in English Achievement score in the post-test.
16. There is no significant difference between the Pre-test and the Post-test in English Achievement scores of the Experimental group taught through innovative method using Multimedia Learning Package among the Unaccompanied Learners at high school level.

17. There is no significant relationship between Language Creativity scores and English Achievement of Unaccompanied Learners in the post-test of the Experimental group taught through innovative method using E-Learning Module.

18. The effect size for the difference between the Experimental group Pre-test and Post-test, English Achievement scores of Unaccompanied Learners, taught through innovative method using Multimedia Learning Package is not large at high school level.

19. The gain ratio obtained by Experimental group of Unaccompanied Learners taught through innovative method using Multimedia Learning Package in Environmental Science for high school students are not high.

1.13 METHOD OF STUDY

The Experimental method has been adopted by the researcher to find the effectiveness of a Multimedia Learning Package for English on Unaccompanied Learners.

1.13.1 POPULATION

The researcher had a target group of Unaccompanied Learners from Bangalore as the population to carry out the research to find out the effectiveness of a multimedia learning package on the target group.
1.13.2 SAMPLE

The researcher had 60 Unaccompanied Learners of the 10th std. as the sample for the research. From among the 60, the Control group consisted of 30 students. The Experimental group also consisted of 30 students. In every group there were males and females.

1.13.3 RESEARCH TOOLS

The researcher used the following standardised tool namely Language Creativity Test developed by Dr. S.P Malhotra and Sucheta Kumari. The Achievement test in English was prepared and standardised by the researcher. The experimental group Unaccompanied Learners were taught through a multimedia learning package and the control group taught through traditional method in English.

1.14 COLLECTION OF DATA

The achievement pre-test and post-test scores of the Unaccompanied Learners and language creativity scores formed the data for analysis.

1.14.1 ANALYSIS OF DATA

The term analysis refers to the computation of certain measures along with searching for the patterns of relationships that exist among data groups. The collected data were analysed using the below mentioned statistical techniques.
1.14.2 STATISTICAL TECHNIQUES EMPLOYED

The collected data was statistically examined through the following techniques to arrive at meaningful conclusions. Descriptive Statistics, Differential Analysis, Correlation Analysis. The collected data was also statistically examined through effect size and gain ratio.

1.15 MAJOR FINDINGS AND EDUCATIONAL IMPLICATIONS

The major findings of the research will be arrived at after the analysis and interpretation of the data. The test scores form the data for analysis. The implications for education can be drawn after the whole process of analysis and interpretation of the data. The findings will give a clearer picture of the implications for education. Implications thus give directions for education. It would suggest ways in which education can take further leaps into the unknown areas of education.

1.16 LIMITATIONS OF THE STUDY

The following were the limitations of the study:

- The study was limited to a sample of 60 Unaccompanied Learners only.
- This study was conducted based on the Karnataka Government State Board School Education Syllabus.
- The learners were from the High School level only.
- It was restricted to the teaching of English.
- The MMLP was prepared only for two lessons in English (one prose lesson and a poem) for the X standard.
1.17 CHAPTERISATION

Chapter 1. This chapter gives broad perspectives of the area of research. It speaks of the Education system in India. It also speaks about government’s initiatives towards improvement of education. This chapter also explains the concept of multimedia and other aspects related to it. It explains the need and importance of this study. It gives the objectives, hypotheses, methodology, and delimitations.

Chapter 2. This chapter contains the reviews of the studies related to Multimedia learning and unaccompanied learners carried out in India and abroad.

Chapter 3. This chapter is specifically dealing with Unaccompanied Learners giving a clear idea about who these learners are.

Chapter 4. This chapter deals with the methodology adopted to carry out this research on Unaccompanied Learners.

Chapter 5. This chapter contains the analysis and interpretation of the data.

Chapter 6. This chapter contains a summary of procedure, major findings, education implications, conclusions and suggestions for the future research, followed by the bibliography and appendix.

1.18 CONCLUSION

This chapter dealt with the broad perspectives of the area of research. It spoke of the Education system in India. It also spoke about government’s initiatives towards improvement of education. This chapter also explained the concept of multimedia and other aspects related to it. It explained the need and importance of this study. It gave the objectives, hypotheses, methodology, and limitations.