CHAPTER VI

CREATING A LEARNING SOCIETY BY ADAPTING THE EDUCATION SYSTEM
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6.0.0.0 Introduction

The major goal of this project is creating a learning society. Preliminary learning communities have tried to form but their ability to attract members and sustain has been low. Support from institutions and businesses have also been meager or non-existent. A need exists for a new approach to creating and collaborating lifelong learning by exploring all possible ways of revitalising the present system of education to enhance wider access to knowledge and learning. Learning should be an ever changing process of knowledge acquisition based on the change occurring in our surroundings rather than instruction that is generic and based on a pre-set old curriculum. We are trying to solve the problems of today using yesterday’s thoughts which will not work if we truly want to progress. This research has explored the trends in e-learning. E-learning is a richer medium of learning compared to traditional methods. It promotes exploratory learning rather than feeding information to the student and all learning resources and interactions are reusable in the future. Although numerous research has been carried out on e-learning, the irony of it is that there has been very little attention given to the needs of the e-leaner, considering the success of an e-learning course depends on the success of the learner. This widespread adoption of e-learning has lead to a greater need for learners to become lifelong e-learners. It also gives learners greater freedom; however this places more demands on the individual, as self-motivation is often a pre-requisite along with an awareness of their learning styles. Our main concern is that the e-learning formats currently only help e-learners of a certain personality. It is thus imperative that course designers cater to all personality types when
devising e-courses through creative learning designs. Rapid technological improvements have meant constant upgrading in every sector that has adopted the changes. However, there has not been an as effective use of technologies that has brought about any significant changes in learning and teaching, referred to as the ‘democratisation of creativity’ (Spender, 2002). Very soon even this e-learning technology will be outdated. Thus in order to build sustainable learning systems we need to think futuristically. This involves thinking of ways to adapt not just the e-learning system but also the classroom and traditional school system by rethinking education, training and learning to meet the needs of society, specifically, learning societies. Only then can we work towards creating wholesome societies that make up a global knowledge hub where everyone is given an equal opportunity to learn. Through interviews with learning experts and ICT professionals, the researcher has identified gaps in the educational landscape. Concepts and ideas have emerged to work towards the formation and building of learning communities and the use of ICT in learning.

6.1.0.0 The Education System In India

As stated by Sam Pitroda in the National Knowledge Commission (NKC) (2008), it is important to identify the challenges that face India and work on them by realising the demographic dividend, reducing the social disparities and sustaining economic development. Ten percent of the total Indian population own ninety percent of the wealth. Seventy percent of the population lives in villages yet there is an urban bias when it comes to provision of facilities and investments in technology. Only 3.5 to 4.0 percent of the total GDP is spent on education, which is not a huge amount and needs to go up to at least 6.0 percent so that the school education will absorb at least 4.5 to 5.0 percent of the GDP. Another factor is the corruption in the system, which results in the money not being disbursed correctly and not reaching the intended destination. Despite efforts to incorporate all sections
12%. Whereas in the developed countries it is 16%, with international average standard of 23%. This is the result of the high student drop-out rates, especially after Class 5 (which many of the students don’t make it to due to the tendency to give up education to fulfill the monetary demand of more basic needs), low levels of interest and achievement, inadequate learning infrastructure, aversion towards technology and change considering distance learning as being of lower value, high teacher absenteeism due to strikes, the large number of teacher vacancies due to incorrect and corrupt hiring procedures, poor quality of education, closing down of universities and inadequate funds. Some of the challenges facing the revamp of the education system in India are the heavy influence of politicians and political strategy in every sector, bureaucracy, incompetence on the part of the staff leading to extended timelines, poor infrastructure, the attitude of the staff and power distance index. Lack of community participation, weak management structures and poor monitoring are other drawbacks that exist in the structure of education.

The current learning system in schools does not permit lifelong learning. Learning in schools and universities today is based on rote learning or temporary learning in order to fulfill a particular need. This need is in the form of scores needed in order to pass an exam done by cramming pages of information using mostly their photographic memory, or the 10-second rule of visual perception leading to information being forgotten soon after the examination. Academic assessments are based on students’ ability to recall information rather than apply their knowledge. The natural curiosity of the individual is not cultivated in the traditional system. As opposed to the classroom behavior of students in Western countries who are encouraged to be vocal in expressing their thoughts and opinions, Indian classrooms call for more submissive behaviour; where speaking out of turn or questioning a teacher’s opinions are often frowned upon. To mould students into wholesome learners there is a need to incorporate and promote critical
of the population into the Indian education system, through mechanisms such as positive discrimination and non-formal education, large numbers of young people are still without schooling. Murthy (2009) describes some facts about the education in India in that although we are a populous nation, half our primary schools have only one teacher for every two classes and an average child is entitled to only Rs 600 per year for primary education. Severe gender, regional, and caste disparities also exist. At the school level it is seen that currently there exists a wide gap in the equality in education. The wish for quality education comes at a high price and can thus be accessed only by students belonging to families that are well-off. The International Schools based on the International Baccalaureate (IB) Program are the most expensive schools to register in, followed closely by private schools. There is still a demand for these schools as the education offered is considered to be of better quality than those imparted at Public and Municipal Schools. The private and IB schools are at an advantage to the public schools as they restrict their classroom numbers to a minimum number of students as opposed to public schools where the student numbers reach up to eighty students per class. Thus with the fewer students the Private and IB schools are able to offer more personalised education with better facilities.

The NKC Report (2008) statistics show that in the labour force in India between the age groups of 15-29, a mere two percent have received formal vocational training and another eight percent have reported to have received non-formal vocational training. These figures are alarmingly low as compared to vocational training of the youth in other Western countries around the world, creating a huge unemployment problem due to the mismatch in the skill-set available and the skills required to perform a job.

The major challenge in India is the low Gross Enrolment Ratio (GER) in Higher Education. According to The Minister of State, Higher Education, Ministry of Human Resource Development, Smt. D Purandeswari (2009), as compared to the developed countries, our GER is restricted to only 11% to 224
thinking. Students are simply given the information by the teachers and are not taught to form patterns in their ideas, question and connect subjects to see learning as being interrelated. Critical thinking assignments provide an opportunity for learners to apply knowledge to practical experiences, contemplating its affect on future learning. Thus this requires cognitive skills on the part of the learner to take the concepts learner and apply them. Since this is considered the most important knowledge skill, it is equally important for curriculum developers and course designers to develop ways to include critical thinking in the online environment in an effective manner. Bruning (2005) discusses the ‘Create- A- Problem’ exercise as part of an online Mathematics course that incorporates critical thinking in the online environment to meet the goals of developing reflective critical thinking in students. The course provided a means for fostering student interaction as well as critical thinking. Students cited (in course evaluations) the ability to interact with other students, getting a new partner every week, and the freedom to create story problems that they can relate to as key assets of the course. They also stated that the critical thinking exercises prepared them to solve the story problems that comprise the majority of the exams in business math. Thus this stimulated the student’s analytical and problem solving skills. Using this same principle of including critical thinking exercises in the online courses, designers will be able to develop projects and assignments that foster growth.

Senge (2000) focused on the need for systems thinking in classrooms, which is still a relatively new phenomenon that requires a lot of experimentation along with a great sense of enthusiasm and creativity on the part of the teacher. According to the learning experts, true wholesome learning cannot be achieved with the individualistic view of each academic subject being separate from the others. True knowledge gain can only manifest when all subjects are integrated. As a simple example, a Mathematics teacher should be proficient in English grammar as much as an English teacher should be
able to include in their teaching, a Mathematical equation to demonstrate the language graphically. Senge (2000) illustrates this concept with the use of behaviour-over-time (BOT) graphs used to explain and plot changes in an English lesson. Other examples are the use of Causal Loop as a schematic way to identify circular feedback, which can be used to increase reading comprehension. In this way, learning in classrooms needs to change to be part of a bigger system rather than considering each subject as being different. Currently there is too much emphasis placed on specialisation in learning that we forget to be generalists. When students are taught to link their learning and recognise patterns they will understand what they have learnt to an extent where they are comfortable applying that knowledge in any sphere. They are able to see the importance of paying equal attention to learning different skills, which is the need of executives and workers of the future.

In terms of learning for adults the corporate work culture that is based on long working hours and extreme work pressures gives little time to the adult learner to transform into a lifelong learner. It is imperative that education needs to focus beyond schools and universities to work and learning cultures in order to get a whole view of the change process that is required.

In order for India to be able to compete as equals on a global scale, it is imperative to find ways to bring out the true potential of each citizen irrespective of territorial boundaries. Universalising education up to secondary level (Class 10) should be the educational goal to work towards. Subhash Khuntia (2009) (Joint Secretary, Department of School Education and Literacy, Ministry of Human Resource Development, Government of India) feels that it is necessary to improve the quality of education and not just access in order to reduce the dropout rates and prepare many more for
higher education or for workplace where skill is essential. India is a nation of a billion people, which means we have a billion minds and so many more ideas that should be cultivated. It is also important that the educational system helps people acquire the key skills and competencies that are required to move from an industrial society to a knowledge society. This involves changing from a country based on the quantity of people to a country known for its quality of people. No one is a born leader, but education can do wonders. Rules and regulations do exist in India, however adherence to these rules is overshadowed by bribery, incorrect use of power and mass ignorance. There should be a shift in learning from bureaucracy to the hands of the learner so they can assume greater responsibility in their learning and skills development. Education should be made a civilian right more than an obligation and it is the responsibility of the local governments and leaders at every level to ensure that this right is exercised in order to increase inclusion in education.

6.2.0.0 Systems Approach To Educational Change

“If our earth is to survive, we need to take responsibility for what we do. Taking control of our education is the first step” (Heidi Priesnitz cited in Jahns, 2004)

Education should be thought of not only, as an entity within itself but it should be realised that it is an open system that is influenced by the larger system of living. Any change attempted in the educational system needs to consider the wider influencing factors that would affect or be affected by the resultant change process.

Using a systems approach can help make the components of education more synergistic and systematic. Senge (2008) describes the three main learning
capabilities for systemic change, namely, seeing larger systems that promote
the health of the entire system rather than a quick-fix solution; collaborating
across boundaries that previously divided people in order to build trust and
genuine mutuality where there was previously little of either; and creating
desired futures as thinking evolves from a reactive problem solving mode to
a more proactive desire to shape the system as we envision.

![Image](image.png)

**Fig 6.1 Learning Capabilities For Systemic Change**
*The Necessary Revolution*. Pg. 45)

Systems theory as stated by Dunn et al (2007) is helping to bring about a
major shift in how education is perceived where teaching and learning is no
longer a linear system involving teacher input and student output but more a
complex system of interrelated parts. The process of action research is
advised by Dunn et al in order to create a collaborative engagement in
learning, corrective analysis and change. This involves investigating an
issue, taking actions to change it and then conducting ongoing assessments
to check its effectiveness. In order to bring about positive change in
education, the deciding committees like School Boards and professionals
should involve skilled professionals and create better systems of education.
Aggarwal (2003) describes the systems approach in education as a rational problem solving method of analysing the educational process as a whole, incorporating all of its parts and aspects, including the students and teachers, the curriculum content, the instructional materials, the instructional strategy, the physical environment and the evaluation of instructional objectives. In order to make students lifelong learners, it is seen as being of real importance to train and guide them in using the correct methods of learning. Instead of raising passive learners, students right from the start of their educational experience should be groomed to self-learn and make decisions rather than depending on teachers and parents to spoon-feed information and make career related decisions. This change in classroom attitude needs to start from the time they are toddlers, so that independent learning becomes second nature to them. Mukherjee (2009) describes the efforts made by Akshara, a school in the heart of Kandivali, Mumbai, where there are no admission tests or interviews and children are taught to learn without the fear of failure. Knowledge is imparted through projects done by the students where they are shown and taught information through practical methods.

But along with changing the individual, the parallel system of teaching and assessing students needs to change as well. Literate staff that are skilled should be hired that will support the changes that are needed in the classrooms. Teachers should also be open to new learning methodologies that are digital or online. Assessments should move to open book exams where students are marked on their ability to analyse and comprehend information instead of just regurgitating facts. The entire mindset needs to change from need-situation based learning to proactive, creative and innovative methods of learning and teaching where students are made responsible for their learning. This responsibility in turn will help inculcate a sense of pride through ownership of information in these students and a sense of fulfillment for the teacher. Teaching and learning should become a reciprocal process as supported by Dunn et al (2007) who describe it as a process where the teachers become students and students become teachers.
while both are continually learning. In this way knowledge is never static but continuously diversifying leading to further connections, perpetuating a cycle of sustained learning.

Dunn et al (2007) outlined the educational elements and their interrelationships within the system starting from the individual learner who is part of a classroom. This classroom does not exist in isolation but is embedded within a school, the school exists within a community and the interface between the school and the local community has a significant impact on the opportunity for students to learn. Seeing education in this light of wider systems helps reformers focus on wider circles of change when re-designing and redeveloping the system. As echoed by Senge (2005), each individual school is both a whole unto itself and a part, a place for the "presencing" of the larger educational system. It is important to take active steps in order to create awareness of our environment and everything around it in order to increase sustainability and social commitment. The importance of learning societies for the future should be realised where people can come together to learn and gain knowledge irrespective of where they are in their jobs or educational level through school.

6.3.0.0 Building Learning Societies

To create a learning society it is important to have a multi pronged approach. One is to create communities of practice, especially in rural areas; create learning communities based on specialisations of students and extend these to include urban and rural learners; and create reusable learning centres in areas where resources are limited. The goal of the learning society is to be able to educate every citizen right from the wealthy to the underprivileged. Education can and should be used as an equalizing force in order to put an end to discrimination in the social system, especially in India, where it is the most prominent. Imparting education strengthens individuals giving them a
sense of purpose and turning them all into competent leaders. Thus we need to work towards building a caring society. The current view and sentiment of education is highly based on competition. This needs to change from competitive learning to co-operative learning. Instead of competing with one another, the mindset of education should be changed to encouraging students to help each other in certain ways. Students should not be graded just on their academic ability but also on their attitude and values. By incentivising good behaviour and sound morals, the education system can make individuals reflect on their ideas and actions and take appropriate measures to correct them.

Learning societies are the first step towards providing learning opportunities. Online and face-to-face communities both have a common sense of purpose; they have members who participate and interact with each other; there are formal and informal groups with norms and roles that members undertake and understand and all members in the community work towards a common goal or purpose. In order to build a true learning community, the participation of students, teachers and the community is vital. When these three entities work together, they move towards the establishment of active systems of learning and a shared vision of educational change where each participant comes together on equal footing.

Fig 6.2 The Main Components Of A True Learning Society
As opposed to the more private lives that people in Western societies live, India is a country where life is lived to a large extent in public. There is also a greater emphasis on cultivating a sense of community whether it is a local village council, a religious community, recreational communities or building and neighborhood societies. By extending this concept of community belonging to the learning arena, it is possible to create societies and communities of people who come together to share knowledge and learn from another. It can include both formal and informal learning. It is known that workers learn more on the job rather than in a training classroom as the learning is personal and relevant which is highly effective. This is because formal learning is most of the time imposed by pre-set ideas while informal learning draws students who are responsible for their own learning. Applying this logic to learning communities will help increase the learning abilities of students. Educational institutional libraries should be encouraged and their space utilised to organise training and coaching programs for citizens that is open and accessible to all interested members. These could be courses on different topics organised on a weekly basis. It could be either practical or other courses especially for housewives or women who have had to give up their future learning plans in order to concentrate on their homes and families. Singapore has adopted this method of building learning communities by organizing courses on different topics that anyone is free to attend.

Families in Western countries like the United States of America and Australia get together on the weekends and organise different learning incorporated activities for their children to be able to socialise and learn together in an active environment. These activities include anything from developing artistic skills to sports, music and even projects initiated in classrooms based on the learning curriculum.

According to Muralidhar K S, CEO, LearnSmart (2009) the economy grows when the youth become competitive enough to become successful
entrepreneurs and when enough confidence is built among them through the dissemination of multi-dimensional knowledge. In learning societies individuals have an opportunity to develop their self-esteem and confidence while renewing their skills for employment. When learning communities possess these qualities they can encourage quality interaction between the members, which contributes to the overall learning process.

These communities can be used as a means to connect people to other people, their thoughts, their views, experiences and ideas which leads to more practical learning that is shared and knowledge that is cooperatively built upon through these interactions. A vision of society of shared values, mutual respect and humanity can be achieved through partnerships with schools and universities collaborating with industries and other related workplaces. Using these connections among members of the community will in turn lead to better participation and individual excellence through knowledge sharing. It also ensures the promotion of new and innovative learning strategies and the ability to implement successful strategies at a quicker rate. This makes the learning more real and tangible than just a handover of information using technology. It also offers individuals an alternative to learning in isolation that is currently associated with e-learning. Already social networking sites on the Internet have led to the creation of communities that share similar ideas, beliefs and passions to come together to discuss their views, share their thoughts and “mingle” with others leading to the expansion of an individual’s network and an opportunity to connect to a vast number of people irrespective of their job status, background or nationality.

The use of ICT will be particularly beneficial when used for the betterment of society by including people who are living in remote and rural areas including and mainly focusing on women, scheduled castes (SCs), scheduled tribes (STs) and other minorities and disadvantaged groups. This is the main proportion of society that makes up the population of India, whose literacy
should be of particular interest to the Government and its citizens in order for India to truly progress. A young India today is on the starting curve of a growth explosion in terms of technology growth and consumption. Using technology and online infrastructure will help in the promotion of learning societies by providing opportunities to neo-literate adults for their lifelong education. It also enables them to continue their learning beyond the basic skills acquired and helps others who want to accelerate their individual development and personal productivity through skills development. The Government needs to focus their efforts on increasing their e-governance projects. E-governance enables citizens and the outside world to access government information and respond to it as efficiently as possible through the use of the Internet and other channels such as mobile phones. These projects would help improve the operating efficiencies of the government and open up electronic communication channels between the government and the people resulting in quicker responses and services.

The creation of ‘communities of practice’ will be essential to ensure that the initiatives are carried out in smaller communities first that can then come together to form part of the larger learning societies.
The 6.3 suggested communities of practice:

**Educational Films**
- Educational Models
- Educational Tutorials
- Educational Research
- Educational Design
- Educational Management
- Educational Standards

**EdTech Technologies**
- Learning Management Systems
- Educational Software
- Educational Apps
- Educational Games
- Educational Video
- Educational Podcasts

**Video Lectures**
- Educational Videos
- Educational Webinars
- Educational Webcasts
- Educational Workshops
- Educational Conferences
- Educational Workshops

**E-Learning**
- Online Courses
- Online Tutorials
- Online Forums
- Online Workshops
- Online MAP
- Online MAX

**Communities Of Practice**
- Learning Communities
- Professional Communities
- Student Communities
- Alumni Communities
- Alumni Communities
- Alumni Communities

**YouTube Edu**
- Educational YouTube Channels
- Educational YouTube Videos
- Educational YouTube Tutorials
- Educational YouTube Workshops
- Educational YouTube Conferences
- Educational YouTube Workshops
One of the fastest ways of creating a learning society is through the use of Information and Communication Technology (ICT). ICT relates to a broad category of technology. It contributes to more efficient teaching and training processes and supports transformation within the education institutions. In India technology is embraced as rapidly as it is introduced into the market. However, the adoption of technology in learning and education has still been relatively slow. Human nature is to adapt to changes. The generation before did not use laptops and mobile phones as much as we do, but have taken on board this technology and adapted to it. Similarly, in education, we need to move from the state of awareness to a state of rapid adoption and adaptation in order to keep up with and draw out the best from the technological improvements.

The experts consulted specified the four technology mega-trends that will create significant changes across the educational realm. These include anywhere, anytime learning; learning communities and societies; real time learning based on collaboration and cloud computing. Cloud computing is an emerging approach to shared infrastructure in which large pools of systems are linked together to provide IT services.

The availability of new technologies like WI MAX (Worldwide Interoperability for Microwave Access) which provides quad services such as phone, video, voice, data and cable TV ensures more quality and speed and an extremely quick data transfer rate. Many countries around the world have already taken the leap to providing WI MAX technology for their citizens to enjoy a wide spread availability of wireless internet at any point, even in remote places with no compromise on speed and quality. This technology can be implemented in India to connect rural villages to the Internet using broadband without the difficulty of installing cabling through difficult terrain to reach only a few people in remote places. This will increase the motivation of people in rural areas to learn as the study material and the
knowledge comes to them instead of them having to travel long distances to
go to school. Maintenance of this technology is also relatively cheap and
hassle free. In this manner learning through the internet and television can be
made available to any part of India, thus increasing the chances of awareness
and creation of learning societies.

E-learning communities can be used to provide educational opportunities to
larger segments of the population with the best elements of formal and non-
formal education based on innovation and flexibility. It is also helpful in
promoting self-learning, continuing and the lifelong learning culture in
society. Downes (2005) states that we derive our competence from forming
connections. These online learning communities carry out all their
interactions and learning through the use of communication technology (like
video conferencing, telephone calls, Skype, web conferencing, etc) without
physically being in the same place. Lectures and other information can be
delivered online to a community that convenes at the same time although
being geographically dispersed to discuss and learn new information or
classrooms lectures. The nature of the online lectures enables the inclusion
of industry experts, presenters and other professional attendees who
otherwise would not be able to physically ‘attend’ these lectures if they were
held traditionally. The participants in these online learning communities
have access to exclusive content from presenters who are able to give them
practical knowledge. They are also able to network with other attendees thus
increasing their professional resources and building their contacts and as
Osberg (2002) believes, learners are able to fulfill their need for social
interaction in an online class.

One of the main global concerns of our times is climate change and
environmental issues management. By promoting environmental and health
education, we are able to learn respect for life and the urgent need to protect
and preserve our planet. Pandemics, epidemics and other diseases can be
controlled through the consciousness created by education. Workshops on AIDS awareness, yoga and meditation are holistic methods of healthy living that should be incorporated into the education system. The true value of education needs to be realised as not just being restricted to academics but more about making the students sensitised to the needs of society by letting them question and grow as individuals. Ethics can be thought as the base on which education is built on. According to Aruna & Punithambal (2005), people maintain empathy at heart and equanimity in the head if they are rightly educated ethically and spiritually. The problems faced by humanity usually stem from an unequal distribution of resources due to large population, discrimination and economic hardships leading to civil unrest and war. Monetary funding invested in war means a decline in the investment for education among other sectors. Thus education should be used to provide wisdom, eradicate global illiteracy and instill the values needed for people to live peacefully with each other. When people feel like they are not being judged based on their availability of equal opportunity, material possessions or status, they are more likely to work in cooperation with each other towards universal brotherhood, cultural compatibility and resultant peace. Terror-free, peaceful education should be the goal for all. It is engrained in us to pass on religious ideas and beliefs to the next generation. Along with these thoughts, it is also equally important to pass on the sense of civic responsibility to students right from when they are young in order to inculcate a sense of cleanliness which we are so quick to praise when talking about Western countries but not quick enough to practice in our own country given our non eco-friendly ways. By re-directing the thoughts of individuals away from destruction to harmony, negligence to responsibility, we can build a society where there is respect, law and order, mutual understanding and tolerance.

There is also a need to meet the shortage of teachers and transform them from deliverers of content to that of mentors. Education should move from the stage of preaching based on past events and efforts made to solve past
problems to teaching and helping students get equipped with the skills needed to tackle the problems of the future. This is the kind of change that is needed in the learning canvas in order to help mould the thinking of students by helping them to learn how to learn, and finding better ways to learn everything they need to know and do in the future.

Teachers should be encouraged to constantly upgrade their skills and training must be provided to equip old and new teachers with the necessary tools and know-how to be able to impart knowledge that is adaptable and useful to the students. Teachers play a big influencing role in the lives of students. It is only by educating the influence that we are able to bring about true change. However, these steps need to be taken keeping in mind the concept of learning for all and an equal access to lifelong learning.

A structure of appointing 'Education Police' at every level, including community, locality, suburb, village, district, state and finally at the national level should be put in place to ensure that children should be learning and not labouring. Trying to get child labourers to become full time students could be a great challenge and be met with extreme disapproval from parents and children. For urban students in the educational system, motivation to study is strong because of the need for certification. However in villages, education may not be seen as being of importance as these families are mainly struggling with fulfilling basic human necessities of food, water and electricity to consider bringing in technology. It is important to understand their needs with the intention of explaining to them how they will benefit from education. It is also necessary to tailor the education to fit in with the other activities that the labouring children undertake, so as not to remove them completely from their earning potential and provide them with incentives to study through Government funding schemes and active involvement of the Government.

The squad of 'Education Police' should involve active citizens from the local community who if given a chance to make a change are ready to voice their
opinions and make known their actions. This involvement of the local citizens is seen in the form of the Force 24x7 team led by Brigadier Sudhir Sawant who formed this movement post 26/11 (Mumbai Terror Attack) in order to create awareness and train civilians in responding positively and reacting in an educated manner in the face of terror. As an ex-army officer, this initiative by Brig. Sawant is a way of sharing one’s expertise and knowledge. This in turn works towards creating learning communities of people who are given the chance to enhance their knowledge and learn new skills.

Programs like Teach India have seen professionals give up their corporate jobs in order to contribute to the knowledge development of society, particularly in rural areas where illiteracy is highest. All institutions and the community should encourage behaviour like this to develop a global mentality set on helping the deprived. This can in turn lessen the gap between the haves and the have-nots. The program proposed is “Grow More Teach Four”. Students can be encouraged by rewarding them with grades based on assignments that include sharing their knowledge with others in society. This could be a set number of people, which could be a minimum of four or more (of different social backgrounds) that they need to teach and have them successfully pass the examination in order to help themselves get good grades. In this manner students are forced to spread their education and knowledge instead of keeping information to themselves. Schools should also collaborate with the local council of the area to try and organise two days or more a week when the underprivileged children from the area can come into school and interact with the children of the school. However for this to be a success, the support of the parents is also needed. Parents should encourage their wards to go out and be sensitive in society. This will help them expand their views and move beyond importance given to school and tutorial classes to share this knowledge in society. Eventually this will lead to the creation of caring, learning societies and help individuals to develop an overall positive attitude. Attitude is important as it provides
direction to one’s life. Companies have often admitted that they hire employees firstly for their attitude and then train them on their aptitude. It is thus important to inculcate favourable attitudes in the minds of the students and learners.

India is a country that is extremely partial to and influenced by cinema and the Bollywood movement. Since film is such a widely distributed medium, it would be an extremely effective way to spread messages of cultural change and awareness especially in the educational sector. Efforts have already been made by screenwriter Amol Gupte, who through the film ‘Taare Zameen Par’ was very successful in bringing forth the plight of dyslexic learners who are considered as being mentally disabled in the conventional school system. It further illustrates the need for the school system to address the other intelligences of students such as intrapersonal, kinesthetic, interpersonal, instead of only focusing on analytical intelligence and expecting all to conform. Including prominent film, media and sports personalities to act as opinion leaders in order to support the initiatives of educational communities will enable the message of these learning initiatives to get through to the people.

The people in rural and tribal areas; including working people, housewives, and other people are confined by physical or situational barriers. There is also high cost of learning which most of the people cannot afford and have to give up their education in order to start earning and support their families and other living expenditures. Ways of making education free and/or very economical for everybody need to be explored. Different media should be used, including the newspapers, television, radio and mobile learning. Learning should go beyond stagnant, outdated theory in books to knowledge of global issues and an awareness of how it will affect oneself.

The creation of learning hubs or learning centres will ensure that knowledge and education is imparted to the rural areas, in an efficient manner that
makes it reusable especially in an area where resources are minimum. This flexible use of collaborative learning spaces ensures not only interactivity but also helps make the space more durable. It is crucial to make optimum use of community space and resources. In the rural areas, common meeting areas or schools can double up as learning centres. This space can also be used as a community centre (used to conduct awareness programmes and administer medical initiatives) and when connected to technology, can be an Internet café for computer learning, gaming area, virtual learning hub, etc. Students when left to explore the computer unsupervised can learn in self-organised groups and help each other. In this way they can learn to navigate and eventually achieve computer literacy. Serious educational games and curriculum-oriented content will help students enhance their learning of schoolwork. Quinn & Clarke (2008) believe that serious games help recast otherwise boring learning tasks into one that is game-like and fundamentally alters the experience of the learner. The concept of Webworlds started by Reliance is a tie up with Xavier Labour Relations Institute (XLRI) Jamshedpur where good quality lectures from universities overseas and in India are made available for students to learn from in a synchronous manner. This has facilitated the ‘Be local, think global’ possibility of learning and development. Microsoft Unlimited Potential IT Training Program has trained over 120,000 men and women through over 900 community technology learning centres across the country. By teaming up with NGOs, this program has enabled individuals to learn further and apply their knowledge in different fields through better job opportunities.
Newspapers and television are efficient ways of updating people on the happenings around the world in an economical manner. By including technology as a means of distributing this knowledge, we can reach out further to all areas of society. This wider spread of learning can also be used for the emancipation and empowerment of society. The media controls what we are learning and the level of our awareness. With the education of rural people, we can stop their reliance on believing completely in the media and help them formulate their own opinions on the goings-on in society.

E-learning should be designed so that the effect of that kind of education can be experienced on the entire family, and not just the student becoming part of a learned society. As believed by experts and also echoed by Senge (2000), the child’s ability to learn is deeply related to the learning capability.
of the child’s family and to the resources available to that family.

Since e-learning is mainly dependent on access to a computer, it cuts down the number of people that can participate in e-learning. Many households in India do not have a computer but almost all of them have access to a television. Digital learning has taken on a new level with cable providers such as Tata Sky offering at home learning solutions at minimal prices. In this manner, students are able to re-visit what they have learnt in school and have a chance to master the concepts while learning at their own pace. Another advantage of learning in a home-based setting allows not just the student, but also the entire family to learn together. Children can teach their parents, grandparents, domestic helpers and anyone in the family structure. This promotes the goal towards building learning communities and helps in reducing the digital divide.

The parents and citizens should be encouraged to take part and work in collaboration with teachers to contribute to learning societies. There are changes in the demand for learning with students actively participating in their learning and an increased sense of communication between teachers and students. With this increase in the demand, there should be changes to the content of learning with a need to focus on student’s abilities and aptitude. The learning should also be flexible to cater to the needs of the individual learner by having general and elective subjects.

The rural or sometimes old school thinking in India is that it is not important to educate the girl child as their ultimate goal is seen as being good housewives in the future. Learning should thus be job related. People don’t see schools as being useful or lectures taught in college as pertaining to what they will be using in their jobs. It is important to relate the skills taught in the course to the individual’s career. Through practical sessions on the web and virtual tele-learning the women can be trained in housekeeping duties, cooking, etc that could help them be better skilled. Using women to educate
the rural girls and women will motivate them to learn more and also make them more comfortable to ask questions and learn better.

The rural people can also be educated on **sanitation and hygiene** in order to prevent them and their families contracting diseases. Currently, in rural India, a child dies every minute as a result of succumbing to pneumonia. This is mainly due to malnourishment coupled with pollution and poor hygiene. It is important to teach and educate people on basic hygiene and good nutrition and prevention techniques such as vaccines to eradicate deadly diseases, which can be prevented. By educating them on the importance of prevention, more than just administering aid when required enables the common man get a thorough insight into the awareness exercise and will be able to practice it with better understanding. Providing education on topics such as First-aid, midwifery and firefighting is also useful especially in villages where access to medical expertise and emergency services is scarce and/or has a time lag. By training people in basic first-aid they would be able to administer aid and lead to a reduction in lives lost.

Online learning can be used in a way to **empower** especially the **women and disabled people**. Literacy of women can be said to be a pre-requisite for socio-economic development of a country. It is necessary to focus on this group of society so that a child can benefit right from the birth and be directed in the right way towards education and development of a career. E-learning can be used as a mass tool to educate groups of young girls in other skills that would empower them to perhaps start their own business or help them earn their own income such as embroidery and stitching classes, classes to learn basic beauty treatments, gardening, computers, jewellery design, arts and crafts and other vocational subjects. In this manner technology can be used creatively to give women a sense of dignity that comes from achievement and purpose.
Farmer suicides in Indian villages are a harsh reality that is increasing constantly due to ignorance on the part of the farmers who are taken advantage of by private moneylenders. This is mainly because of the failure on the part of the government to institutionalise the credit facility. Farmers should be educated so that they understand that farming is in fact a business and not just a means of survival. By teaching them basic business and trading skills, they would be able to chalk out more profitable deals for themselves and be able to recognise a good partnership from a bad one. Besides the farmers, the other skilled workers that are available mostly at the grass root level like construction workers and other trade workers should be seen as the force for rural development, which in turn will lead to national development. Thus efforts should be put into training them with the appropriate skills to be educated professionals on par with other corporates. This is necessary as India has a global opportunity in skill development, as the world requires 470 million skilled personnel in the age group of 16 to 40 years in the next 25 years. The Lead India 2020 Foundation launched a drive called Digital Empowerment for rural youth, by organizing livelihood training camps in various districts of Andhra Pradesh with support from the government of Andhra Pradesh in partnership with Hyderabad Central University, and Centre for Educational Research on Human Values. Organising more of these education camps all over the country will help bridge the current gap in skills training.

Forming learning ‘Communities of Interest’ based on specialisations of student learning will help students interact with other students, not only within the confines of their classroom but all over the country and even around the world. It also gives teachers an opportunity to learn and develop as professionals, while parents and citizens learn and grow by participating in educational activities. Learning can be optimised with the sharing of knowledge and change directed ideas can be built upon through the constructive sharing of thoughts.
Fig 6.5 Suggested Framework Of Communities Of Interest Based On Specialisations
Fig 6.6 Example Of A Suggested Student Community Of Interest Based On A Single Specialisation (MBA)
Above is a diagrammatic representation showing the Community of Interest for a Single Specialisation- Management Of Business Administration (MBA). This shows the ability to link up a student of any specialisation in one country to that of a student doing the same specialisation in another country. Just as students of a certain specialisation can collaborate with one another across geographical boundaries, so can this model be applied to teachers as well. The teachers of a certain specialisation can come together to work creatively and challenge one another’s concepts and ideas to make teaching more active. The future success of learning will be based on the ability to collaborate and learn along with an increase in the academic-industry collaboration. Experts believe that there is a need to support the new generation of global citizens through cross-cultural encounter, exploration and exchange of new ideas and a creation of a global e-community of people committed to increasing the understanding and respect among different faiths and cultures. Setting up these e-communities facilitates network building bringing about an alliance for knowledge sharing across time-zones and distance enabling people to meet with specific expertise and discuss their needs and innovative solutions.

Taking this concept of Communities of Interest further, it would be extremely beneficial to link up urban specialisation groups with rural groups to broaden the perspectives of both groups and enable them to see issues and ideas from a different realm. Role reversals and internship opportunities through mate ship programs can also be explored and encouraged through these communities. Creating online learning communities with the use of tools such as Plone and Drupal is relatively easy and effective especially to sustain these networks built on specialisations.
The above diagram displays the proposed two-way interaction between the students, teachers and the community of urban areas with the students, teachers and community of the rural areas. It is based on the concept of informal learning which is not often given its due share of recognition. Informal learning is now being recognised in companies as training and learning that is equal to, or better in effectiveness than traditional methods of training and learning. Considering in rural learning centres, the courses taught may not be as specialised as in the urban universities. Hence the rural learning centres have the multi specialisation factor where the students are able to connect to people from different specialisations in the urban areas.
This exposes them to a wider range of knowledge that they would otherwise have not.

Development in technology helps reduce the access gap between urban class education and rural students. Currently there are 850 million people in the world with computer access. The vision of the NComputing solution is to bring affordable computing to the next billion people so that they too can join the digital economy. As explained by Manish Sharma (2009) (Vice President, Asia Pacific, NComputing) the technology allows a single desktop computer to be shared by many users (up to as many as 30) at the same time at very affordable costs. The Government of Andhra Pradesh chose to implement NComputing in order to bring computer access into 5000 government schools to benefit 1.8 million underprivileged children. The other benefit of the NComputing virtual desktop technology is its waste reduction by using just 1 watt of electricity resulting in a 98% reduction in electricity and a 99% reduction in e-waste. This helps save money in the long run and works towards meeting green computing goals. The State Institute of Educational Technology (SIET) is constituted by the Government of India to promote learning and dissemination of information through radio and television. SIET Kerala successfully set up a CD library project in 1000 Higher Secondary Schools containing 150 CDs; 2500 High Schools containing 10 CDs and 3200 primary schools containing 50 CDs in the state of Kerala. They also implemented a full-fledged e-learning project in 6800 schools in the state of Kerala.

The main aim of e-learning is to design courses that are in accordance with the special needs of the learners and cover needs of all types of learners. Faculty should be trained in technology so that they can act as co-facilitators and adopt technology as a way of life. This should be the norm in education and only then can we create learning societies. Students will consequently realise the power of e-learning where they can avail of the best teachers, experienced staff and field experts all at their convenience. Dinesh Mehta
(2009) (Founder-Chairman, Top Chalks, India) explains the vision of 'democratizing education' in India, which means that every student who is motivated and who wishes to learn should have an opportunity to learn from the best minds in India. A parent's poor economic condition, lack of qualified instructors at institutions or lack of other similar resources should not be the reason for depriving a student of first class education. TopChalks.com, with the assistance of its unique applications, processes and means of delivery seeks to capture the expertise of a handful of excellent instructors in each of the areas of competency, to capture their course content in its depth, along with experience that a student expects in a normal classroom and deliver such content and experience efficiently to the target student audience via Internet, within the classroom, via digital libraries and via learning centres. Using such technology can ensure education being delivered to the masses with the same sense of quality and access irrespective of their social status. Using these different methods of including learning in the community, we are able to work towards instilling the concept of lifelong learning right from the start into young learners and gives the older learners too an opportunity to progress in their learning.

6.4.0.0 Blended Learning Communities

Currently, the most common method of e-learning delivery is through blended learning, which includes both face-to-face learning and online learning. Keeping this concept in focus, it is inevitable that to get learning communities started it would be wise to make them blended learning communities.
The thoughts of the experts suggested that the future of e-learning is based on a blended learning solution that is partially Web-based and partially classroom-based. This enables learners to learn the basics of their content individually according to their capacity and speed, while the interactive portions and discussions can be carried out in face-to-face sessions. This on the whole is thought to lead to higher retention among e-leaning students.
In the initial face-to-face meetings learners and community members get a chance to come together and get to know each other personally in a traditional set up. At this stage the main aim is to introduce the community members and encourage them to get to know each other. In this way, when the group members know each other, they become more comfortable working in their groups online and sharing their opinions and views without inhibitions or the feeling that they are talking to strangers. These face-to-face sessions help bring about a certain openness which will translate as effective collaborative learning in the online space.

Once the learners get acquainted with each other, they are comfortable to move onto online discussions and lectures in a virtual classroom. At this time, the learners already know the other members in the group. Thus they just extend their physical relationships online. Participants can be divided into sub-groups in order to encourage more interaction and a greater chance for every member to have a say.

Follow-up discussions can take place both face-to-face and online, depending on the choice of the members. The members who are not physically present at the meeting can be included via tele-conferencing and video conferencing. In this way, they also feel like they are included in the discussions. These follow up discussions give participants a chance to share project plans and the efforts carried out, reflect on the findings of any research done and also an opportunity to be mentored by tutors and their peers through constructive feedback. In this way, learning does not stay with the individual but is shared among the members of the society leading to a greater achievement of learning objectives.

Since any community will also have new members added to it, the groups always re-convene in order to introduce new members and increase the
learning communities so that all citizens have a chance to be included in these learning initiatives.

One of the main concerns of online learning is the lack of personal relationships that would have formed given a traditional face-to-face setting. Blended learning communities help bridge this gap by giving learners an opportunity to form personal relationships during their face-to-face sessions and then extend their relationship further through their online discussions and web seminars. However every participant in these learning communities needs to take equal responsibility and have clearly defined roles so that they are aware of their requirement to participate and contribute to collaborative learning leading to a substantial improvement in educational quality.

6.5.0.0 Trends In E-learning

A quote by Confucius sums up the need for interaction in education perfectly.

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

Learning should move from being static to a hands-on or interactive heuristic approach to learning. Online learning is called e-learning and not e-teaching. Hence the focus should move from the teacher giving the knowledge, to the teacher generating the knowledge from students. The Web gives students the ability to explore to the ends of the knowledge topic. Personalised learning is currently at the forefront of e-learning. The central theme is about putting the responsibility of learning back on the learners so that they become active participants rather than passive observers. As previously discussed, students are motivated to learn when they know and feel that their individual needs are being catered for, i.e. they feel like they are in a classroom for one; where all the course material, support services
and guidance has been designed specifically for them. This will be the fulfillment of true learner-centred education.

There is need for a prerequisite that all faculty have online competencies, online pedagogy as well as technical skills. Online teaching courses and training for staff in the LMS (Learning Management System) equips them with skills above the normal teaching skills necessary to teach specifically in the online arena. Skillful teachers is what helps the course become extremely interesting and active or completely monotonous for the students. Hence adequate training and development for online course instructors is of uttermost importance for the wellbeing and benefit of the students. However as stated by Deshmukh (2009), the training and re-training of about 3.15 lakh required number of teachers for this change over in 70,000 primary schools is a herculean task that cannot be achieved with the existing training facility. YCMOU, Nashik, IIE, Pune and KK College, Mumbai have teamed together to offer students an e-B.Ed. Degree through Tech-MODE. This program is a total innovation especially in technological and organisational innovations. The technology applications include distributed classroom with audio graphic and video facility, content development and integration framework, tools and framework for assignment and evaluation, mobile telephony and Internet and LMS. Organisational Innovations include lifelong learning groups, global knowledge and development resources and their delivery to all users, local data and information development, process of empowering groups and community and sharing learning. Thus it is a total paradigm shift that equips teachers with skills that promote self-study, performance based learning, collaborative learning, learning through distributed classrooms and learning supported by e-learning resources.

With the increase in the demand for online learning, there is an increased pressure in trying to get the traditional courses designed for online use. However, designers need adequate time to carefully plan the course that they are developing for online use. It's much more than simply taking an existing
course and throwing it up on the Internet. Considering the delivery methods are completely different, an overall system approach needs to be taken in transferring the courses online. All the interrelated parts of the system like the students, faculty, design of the course, objectives of the course, and recognition for the course needs to be given careful consideration. Muirhead (2004) offers relevant instructional advice on how to enhance the teaching and learning process. This includes community-building activities, helping the digitally challenged, acknowledging the diversity of participants' backgrounds and interests, organising posts and discussions and balancing private email and public discussion. These activities reveal the need for instructors to take a comprehensive view of interaction by making it a major objective within their curriculum plans. Hence contemporary instructors play a vital role in shaping the intellectual depth of their online communities by helping their students become reflective and self-directed learners.

Excellent online training courses for adults apply creative combinations of teaching strategies, using methods like instructional articles, case studies, simulations, and self-evaluations to engage learners. As explained by Morland & Bivens (2005) instructional articles are short and concise documents conveying relevant, critical information to support concepts, procedures, and/or performance based skills. This acts like a subchapter in a book, however its prime characteristic is that it is designed so that the student can understand it independently. This enables users to skip and skim through the online material thus maximising the probability of student success (Morland & Bivens, 2005). Through research Bennett (2007) discovered that the ideal length of a module is between 15 minutes to 30 minutes in order to achieve maximum attention and participation from the online learner.

The course content is another deciding factor in the completion of online courses. It is important to keep the material relevant so that the learner is easily able to relate the material to their frame of reference, which will
ensure the learner's attention. Cory-Wright (2007) emphasises the need to rethink the structure and layout of online courses by moving away from the templated, page-turning approach of some current e-learning courses and making it more user friendly. This can be done by gaining an understanding of the target audience and culture that will help accelerate and guide agreement on an acceptable and effective design treatment and concentrating more on the core design concepts rather than focusing on volume.

Adhering to these principles allows learners to see the relevance of the material being taught, respect the expertise of learners, allows learners to control their own learning paths and emphasises clearly the connection between the course and the real world. Students need to learn how to become meta learners. Metacognition is interactive. As put forth by Pilgerstorfer (2005), student's perception of himself or herself has an impact on their performance, achievements and self-management of their own learning. Metacognition influences the student's orientation to learning tasks and problem solving. Performing the task or solving the problem influences the belief in their personal and academic abilities, therefore metacognition allows students to believe in themselves.

Good visual design can improve metacognition as believed by Pilgerstorfer (2005). This is because metacognition, in its most basic form, is the activity of thinking. Since thinking is often taken to be a mental activity, largely a matter of manipulating internal representations, there has been little reason to look to the structure of the environment as a factor in thinking. Kirsh (2004) argues that just as visual design can reduce the cognitive effort involved in managing the learning process, especially those aspects of the process that depend on metacognition. Well-designed environments make metacognition easier.
Finnegan (2006) brings another aspect of e-learning instruction based on designing e-learning with an appropriate reading level that will enable the learner to read and comprehend the material; which will foster the student's learning. E-learning includes text-based courses that use the Internet as the means of correspondence and requires the student to read course material, post written responses, and interact with fellow students through threaded online text-based discussions. E-learners have varied reading skill levels and preferences with online reading. E-learning courses also vary greatly in readability or reading level. The gap between student reading skill and course readability will affect student comprehension and learning and hence reading skill must equal or exceed readability to ensure comprehension and learning. Thus there is a need for ongoing research to evaluate the online reading skills of typical adult learners as compared to the readability of e-learning courses in order to narrow the gap between course readability and learner reading skill. Thus instructional designers should pay particular attention to the level of language / vocabulary used, use of graphics, page layout, interactions, and other methodologies to engage the learner in a deeper level of engagement with the content.

The main part of the online course is the Virtual Learning Environment (VLE). Some of the most common VLEs in use today in universities and institutions are Blackboard and Moodle while others include Elluminate, Activeworlds, Respondus and Desire2Learn (a course management program). Blackboard has many noted benefits for both students and teaching staff, which include the ability for learners to access their learning at their convenience making it self-paced and personalised. "The Journal" feature helps develop reflective practice and improves student's own learning performance. Blackboard also offers a flexible, pick-and-mix approach to a range of educational support tools that designers can select and use when planning and building an online course. Moodle is a feature rich course management system (CMS) and an excellent tool for setting up a
VLE used to conduct fully online courses or in blended learning. It is good for uploading student work, providing grades and feedback and is easy to add all sorts of resources. It also includes useful blog and wiki features.

There needs to be more use of Personal Learning Environments to help students receive individualised learning by choosing their own suite of tools that integrate seamlessly with the university's learning management system. Brown (2006) and Howarth (2007) noted that ICT is needed in order to envisage full personalisation of course delivery. These environments when addressing generational styles have to keep in mind the audience that the course is specifically being designed for and accordingly choose the communication, interaction and delivery of the course. The new generation expects information at their fingertips (also known as touch learning or as one SME put it, F-learning Or finger learning) when they need it, through the use of mobile technology. The old school world of pushing the information on to the learners needs to change to one where the students themselves are involved in their learning as energetic, self-motivated participants. Personalising e-learning will help give learners a sense of presence and an online identity so that they are able to interact online comfortably. Experts suggest an increase in virtual worlds where people actually live online in virtual communities and socialise, trade and participate in activities all in these virtual worlds through the use of avatars. Annetta & Holmes (2006) support the use of avatars (graphical embodiments that convey a student's identity, presence and location). Avatars potentially build and sustain group commitment through expression of feelings such as salutations using a person's name and/or referring to the group as "we" (Rourke, Anderson, Garrison & Archer, 1999). Thus avatars work to increase virtual classroom interaction and communication through the use of graphical gestures where people communicate better. This according to Sadowski & Stanney (2002) (as cited in Annetta & Holmes, 2006) is because persons in the VLE essentially acknowledge one's presence and there is further affirmation that
one actually “exists” in the environment. This is common to the Virtual World, Second Life. However these virtual worlds will not just be limited to being tied to a computer but should enable the user to freely indulge in virtual reality. In terms of user ability, virtual richness levels have increased which is great when dealing with learners with short attention spans. Designing courses on the principle of ‘edutainment’ should be the key. Integrating social networking software and Web 2.0 tools such as wikis, blogs, social bookmarking and personal learning environments (PLE) help increase interaction and communication in the online space and help to individualise courses. Apart from Web 2.0, there is soon going to be the introduction of Web 3.0 and Web 4.0 technologies that include using complete virtual learning worlds along with full simulation. Web 3.0 also features the ability to search for similar media files, using a media file instead of just text. In the same manner users will be able to search for information using pictures and photographs. An early version of this is seen in the newly released Google Goggles that recognises items based on the picture it is searched with. This is highly useful for visual learners to enable them to gather data through pictures. Google is also working towards voice-based search service that will work in collaboration with the users Smartphone. All these adaptive technologies are working towards making learning truly learner-centric and adaptable for the learner.

One of the aims of online learning is to give every citizen a chance to learn despite their physical or mental shortcomings. Thus, by designing more courses for the specially gifted children, we are able to include them as well in this goal towards lifelong learning. What needs to be implemented now in further trying to personalise the courses, is an effort to adapt the system according to the profiles of the learners. When this is done, students are able to achieve an identity in online learning. Online lectures can also include other motivating and stress-busting techniques in order to increase the longevity of students in the course and help them hold their concentration.
Just as we have physical education in schools, so should it be encouraged online to make e-learners also fit and healthy students.

It is also important to put aside personal preference and prejudice and build real assessment using highly effective media channels to improve the success of e-learning projects. E-learning projects should be made more interactive instead of just the usual layout of pages. Changes in terms of online games, virtual worlds of work, job simulations, online role-plays and even location-sensitive mobile learning are all ways of developing e-learning for the future to hold audience interest. The use of Twitter, a micro blogging site in online role-plays has been suggested in synchronous environments to improve interaction and sequencing of events. These ideas and tips should be considered when designing future e-learning systems that are focused on giving the learner the best learning experience.

Institutions are making efforts to create personal learning spaces and solutions based on students learning styles. The trend in personalising is towards the use of more visual media, audio and mobile technology in learning along with a mix of face-to-face learning and online learning. New developments in simulation and visualisation techniques should be incorporated in e-learning courses. This will be particularly beneficial to those in the medical and healthcare industry and also to the military and any other industry that relies on visual learning. The SMEs believe that there will also be a further building in flexibility to include simulations and learning through games along with the development of standards such as SCORM (Sharable Content Object Reference Model). The proliferation of video sharing websites such as Youtube Edu and MySpace has seen universities offering lectures and courses online that are free to access by anyone. In the same manner, the experts also suggest an increase in open source software where the source is published to be copied and adapted as an alternative for higher education. An example is the Easynow open source ICT tool which integrates use of multiple media like text, audio and video tools that allows
for inexpensive production and quick upload of quality material for open and distance learning by the content developers. A number of universities like YCMOU, Nasik, BRAOU (Dr. B. R Ambedkar Open University) CIET (Central Institute of Educational Technology) in India and Open University of Malaysia, Open University of Sri Lanka, Maldives College of Higher Education, etc have already started using this technology. In the future, the experts see higher education splitting apart with the people who answer questions, provide content and provide the degree not physically being in the same place or the same institution.

With the courses designed mainly for students who are beginners at using technology, it is important to pay attention to students who may well be highly proficient at using a range of Web 2.0 services. It is also true that different students have different technological abilities making it necessary to offer courses that are flexible so that those on the lower end can keep up and the technologically advanced can continue their study. Assignments and student participation routes should be offered in a manner that is “scalable” depending on students entry-level and their developing technological proficiency. Course tutors can use innovative ways of scalable course delivery by designing mobile lectures, which students can carry on their iPods as podcasts and listen to them on the go. Mobile phones are another gadget that most people in society possess. The Reliance Company in India has helped increase access to technology by introducing the scheme of rewarding farmers with mobile phone SIM cards with every bag of fertilizer bought by them. Farmers can improve the quality and relevance of information received on weather, plant protection (diseases/ pest remediation), other farming information and prices of crops in the market with the information received on their mobile phones. Using mobile phones, farmers are also able to inform and discuss with each other any tips and tricks that they have learnt. Employment agencies and healthcare groups can send out timely alerts and SMS on any jobs available or healthcare initiatives taking place for the unemployed rural poor to avail of. Improvements in
mobile phones means it is relatively common for these devices to now come equipped with video recorders, cameras, large memory storage capacity and Internet. Using this m-learning (mobile learning) technology, lecturers can update students on exam schedules, timetables, assessment scores, class tutorials and lectures and other information without the student having to wait to get to a computer. Mobile devices are also less expensive to buy and maintain compared to traditional computers. The content design however, would have to take into consideration the limitations that come with viewing websites on a mobile phone screen. It is essential therefore to be logical in the website structure and layout which have a direct influence on the experience on the student and their interaction. The issue to consider in terms of mobile learning is bandwidth. In this case, it would be advisable to keep images and scripts and frames to a minimum. Holzinger, Nischelwitzer & Meisenberger (2005) noted that the Mobile Learning Engine (MLE) is a multimedia-based application that can be used to standardise learning on different mobile phones. With this additional mode of learning, students can access instant answers to their doubts wherever they are which would help to reduce failure rates and increase motivation. The success of mobile websites can be determined by the end satisfaction of the user.

Televisions can also be used in order to offer e-learning courses through satellite TV. The strategic utilisation of space on mass modes of transport such as buses and trains in the form of social awareness messages being posted will help increase the reach of the message. Televisions recently introduced in BEST buses have helped in the move towards incorporating learning everywhere. E-learning can and should move towards integrating into everyday objects, also referred to as ambient technologies in order to make it truly accessible. This clever use of media will enhance the outreach of the course taking learning directly to student’s homes.

Increasing the use of graphics and 3D simulations, real-time audio and video lectures may sound highly attractive. When introducing solutions in the
course, it is important to keep in mind the facilities that would be available at
the student’s end in order to avoid the situation where the solution does not
function to its optimum best due to technical quality issues. Thus it is
imperative for the designers to adapt to individuals needs and circumstances
in order to be able to design courses that include a wide range of students.
The goal of e-learning is to include learners from all walks of life in the
learning community and giving them the benefit of education. Some of the
resources that may be available for the more marginalised communities may
not be as advanced as the current market level. This can be solved by
offering the online courses in different bandwidths (broadband and dial up)
to enable the learners to choose their respective course according to the
technical infrastructure and financial assistance available to them. Hence it is
important to accommodate the different learners when planning and
designing online courses so as to include all levels of learners irrespective of
their material situation or technological abilities.

Another aspect of personalising courses is through the creation and addition
of the ‘human factor’ in the virtual world of online learning. The tutor plays
a vital role in awakening the joy of learning among students through creative
expression. The choice of Learning Content Management System (LCMS)
and its integration with other systems in the organisation is crucial in making
the education learner-centric. Students should be able to register themselves
online, choose their language of instruction, read the course catalogue, create
personalised timetables and syllabi, and have a personalised user interface
and settings. Blackboard was found to increase efficiency in the course by
reducing time taken in updating and distributing course material. It also
helped pace the instructor and student and keep the course organised. Course
management systems make learning accessible and efficient for anywhere-
anytime learning. With the proper technology and support, online learning
and course management systems allow universities to grow when classrooms
and faculty office space is impacted.
Considering most of the e-learning is blended learning, it would also be useful to include a virtual snapshot of the actual university and its surroundings for the students where they could view the layout of the university. This saves them from getting lost when they do physically come to university (in blended learning scenarios). Since online learning is available to students from different nationalities, it creates a need to address these various cultures and help them cope with the barriers to the English language. An initial induction and orientation to the course and institution should be provided to the online learner in a language that they would be comfortable with in order to facilitate clearer lines of communication and adhere to the theme of individualised learning. The recent developments online are around the use of multilingual domain names. The increase in the design of language technologies is of significance in addressing the inclusive nature of e-learning where students with different languages can learn together synchronously. This will also work towards providing learners with education that is made to fit their needs.

Administrative duties like question paper generation; assignment submissions and student progress reports can also be reverted to online modes. JILIT offers QGenie, a web-enabled question paper generator for teachers, tutors, parents, students and schools. Learning exchange by Learning Mate offers teachers the chance to create assessments and tests and manage learner’s progress through customised grade books, programmed workflow and tracking mechanisms. This will encourage more paperless classrooms and administration, which is environmentally friendly. Apart from the administrative duties, students should be able to undertake assessments as per the course curriculum: chapter-wise, periodic and customised. The assessment application should be parameterised in terms of complexity levels and provide students with a new set of questions each time they attempt to answer. The scalability needs to be scientifically designed and aimed at drilling down conceptual comprehension among students. Edutainment in different forms such as multiple choice questions, quizzes,
fill in the blank questions, puzzles, crosswords and match the columns designed chapter wise with the intention of developing students reasoning and thinking ability. Only when students understand the concepts and fundamentals of a topic, are they less likely to forget and are better equipped to apply the knowledge in any sector. These assessments will help students check their progress through the provision of personalised evaluation reports on their performance. This way they are able to identify the areas that they are weak in. One of the areas of change in e-learning is the online assessments. A continuous assessment program will help to provide students with feedback to improve their learning and retention. This feedback will in turn help motivate students to keep studying to achieve their goals and objectives of the course.

As opposed to the traditional methods of assessment that are used in schools and universities, online assessment should be designed with the objective of checking the effectiveness of the course design and tutoring skills rather than just scoring the students. Thus if students are not successful in the course, the teachers need to see where they can change, instead of failing students. Discouraging learners in this manner does not work towards promoting the goal of education for all. Instead students should learn to understand and remember, rather than learn for examinations and then forget the content. Dunn et al (2007) throws light on a hidden curriculum goal of most school systems, which is the emphasis placed on time. It should be realised that true lifelong learning requires time. The world culture is based on faster, quicker, more and other superlative degrees. We value those students who learn quickly and frown on those who take longer to accomplish academic tasks. Thus accomplishing a specific task or arriving at the correct solution is less important than the time it took to perform these activities. Learning occurs only when we take time to slow down, in order to speed up our knowledge, make connections and experience the consequences of our actions.
Communication services through the LMS will enable students to interact with
the instructors of the course. Using video and other synchronous and
asynchronous technologies give students the sense of presence and the feel of
being in a classroom. The results of a study done by Yang & Lau (2006),
which compared the perceptions of students on synchronous and
asynchronous courses, indicated that students seemed very positive about
learning in an asynchronous online environment. This was due to various
features in asynchronous online environment such as discussion board, email
and tutorials, which were helpful and useful to their studies. Students also
strongly sensed that the asynchronous course had helped their understanding
of the topics, sharpened their analytic skills, and developed their problem-
solving skills. Most students were optimistic about synchronous learning,
however time conflicts and technical difficulties were the deterrents. Saying
this though, it was noted that if scheduling was made flexible and appropriate
training was given, it seems to be encouraging and promising. Universities are
currently working towards moving asynchronous delivery of online courses to
more synchronous communication as the improvements in technology allow
for this change. Synchronous communication is more realistic in helping
create the virtual classroom scenario as all communication and transfer of
knowledge and thoughts takes place in real time between the instructor and
students. This leads to improved interaction, which is considered the most
important factor in guaranteeing the success of online courses (Reddy &

Goldberg (n.d) however opposes this glowing review of synchronous learning
stating that on first glance, asynchronous communication is simply
synchronous communication's poorer, slower brother, to be used when we lack
the ability or infrastructure to achieve synchronous communication. But this is
not the case. Asynchronous communication goes one step further than
synchronous. Synchronous communication tools removed the geographical
barriers. Goldberg believes that asynchronous communication tools remove
both the geographical and temporal barriers. This helps students formulate and consider their responses adding to the quality of the discussion.

Lewis (2000) (cited in Roberts & McInerney, 2006) asserted that it is important that academics master the art of communicating online in asynchronous and synchronous format using the W.R.I.T.E anagram, which is W(arm), R(esponsive), (I)nquisitive, (T)entative, and (E)mpathetic. By including these concepts in their teaching, the teachers of online courses will be able to increase the ability of all those concerned. However, the methods and means used to increase this interaction should serve its purpose while still maintaining the anonymity of students in the online space. The main reason for enrolling in an online course for students of certain race, ethnicity, socio-economic background and disabilities may be the occurrence of prejudiced treatment for these students in traditional education. Hence it is the responsibility of the tutor to establish certain guidelines with the levels of exposure that students in online courses are comfortable with so that their privacy is not compromised. A database of new technologies available to the staff should be updated regularly to encourage staff to make use of the advancements in communication technology. This will enable them to act as true co-facilitators, encouraging students and help in bringing out the best in them. Gibson, 1996 (as cited in Garrison & Onken, 2002) labeled online instructors as ‘the guide on the side’ or learning engineers presenting and facilitating a range of cross-curricula learning experiences based on investigation and problem solving scenarios (Jaap van oel, n.d). Thus through e-learning, online instructors are able to utilise the improvements in technology and communication to improve active participation in the virtual classroom space by serving as a facilitator or guide and allowing students to focus on exploration, research, and dissemination of knowledge (More, 2009).
The Community of Inquiry Framework (CoI) developed by Garrison, Archer & Anderson (2000) suggests that online learning occurs through the interaction of three domains: cognitive presence, teaching presence and social presence.

A study conducted by Perry & Edwards (2005) using this CoI framework identified that exemplary online teachers create a community of inquiry by challenging students which relates to cognitive presence; supporting students by acknowledging their success and affirming student-teacher relationships resulting in a more human online classroom environment; and creating social presence through teacher behaviour immediacy leading to increased satisfaction in the course. Thus instructors need to understand the importance of their role and explore ways of improving their methods of education in the online classroom, which in turn affects the student satisfaction rate leading to the ultimate success or failure of the course.
Some course design considerations as stated by the experts include keeping the learner enlightened by providing a roadmap of the course. There should also be detailed course descriptions and a layout of the prerequisites. The interface must show the e-learners an overall view of their brief progress with an option to expand to details, including what they have completed and what is needed for them to complete in order to achieve their learning goals. A comprehensive help page and access to an online library where students can browse through digital books and other educational journals would be a great timesaving and helpful tool for the learners. Other elements will include the use of reference sheets and job aids for e-learners who are extremely knowledgeable with extensive experience instead of making them study a course (Rossett & Schafer, 2003). The Subject Matter Experts (SMEs) suggest that during development and prototyping, the content should also be tested with potential users in order to find out the adaptability of the information to help these learners even in the future.

A successful online course design is one that is able to steer the learners to the course content that is appropriate for their individual learning, their skills and needs. This could be with the help of a series of questions at the start of the course that help eliminate the unwanted information and be able to point to a path that is tailored to the learner’s priorities. However, using this method of selection assumes a sense of ‘knowledge to make appropriate decisions’ on the part of the learner. The course also needs to provide meaningful content that is comprehensive, relevant, consistent and creative based on the priorities of the e-learner and not on the beliefs and passion of the learning designer. It is also necessary to ensure that the e-learning transcends the obvious to stop learners from getting bored and losing interest in content they have to click through.
In addressing this challenge of constantly engaging the learner and holding their interest, e-learning course designers need to go back to the basics of a traditional classroom and review some of the factors that contribute to motivating students. McCracken (2002) believes that it is the responsibility of instructors and students to bring the sense of traditional classroom culture to the virtual classroom and expand learning experiences beyond factual content to include ongoing communication, process, and collegiality. Students who perceive a course to be highly interactive will derive more satisfaction from the instruction than students who perceive the course to be less interactive. An important and necessary component to successful Web-based instruction is ongoing communication. Conner (2006) described an e-learning culture as a learning culture where leaders at all levels are enthusiastically engaging one another through available technologies to learn and prosper in an increasingly turbulent world. In order then for an e-learning culture to form, social presence should be created which serves to enhance both student satisfaction, perceptions of learning, and retention (Scollins-Mantha, 2006). One way of creating social presence is by building online communities and creating areas where people are encouraged to converse, as if it were a physical social setting. This would be one of the steps towards a learning society.

In order to help increase interaction in the e-course it is necessary for the course to provide the learners with opportunities for action. Rossett & Schafer (2003) have discussed ways of increasing action by giving learners an opportunity to seek information, trying out their solutions, giving learners a chance to make decisions and compare their ideas and finally communing which goes beyond asynchronous discussion forums and includes virtual classrooms, electronic brownbag lunch discussions, and even instant messaging. In 2007, Wang, H. et al researched the use of DyKnow software in an Internet Protocol Television (IPTV) class. They found that the instructor and the students enjoyed using DyKnow software and tablets in the IPTV class. They thought it was fun to teach and learn in a new way, and in particular, they really liked the chat feature as it helped them to connect with...
the instructor and students at other sites when they lost the bridge connection. Thus the new software used on the tablets enhanced the four types of interaction: learner-content interaction, instructor-learner interaction, learner-learner interaction and learner-interface interaction and made learning more fun and engaging to the students. The study helps course designers learn more about the use of DyKnow to increase the interaction through the use of technology.

Students’ schedules and daily routines should also be considered along with other external motivators such as language. Thus courses should be designed to be multi-lingual, multi-cultural, multi-generational with consideration given to digital access and universal design principles. When designing virtual learning studios, it is important to take into consideration the infrastructure and pre-set up needs such as sound proofing, earthing, water proofing of the studios that will be used for recording lectures.

Just as not every learner is suitable to current method of e-learning, so isn’t every instructor. It is essential that online learning is not a replacement for traditional methods of learning but merely a necessary option as stated by Dunn et al (2007) to continue and in some cases initiate learning in a variety of areas throughout the country and the world. The faculty can ensure the success of their e-learning programs by employing best practices from that environment such as Chickering’s seven principles (Prussing, 2004) based on encouraging student interaction and active learning, communicating high expectations, giving prompt feedback; emphasising time on task, developing reciprocity and respecting diverse talents. These principles can be useful for institutions to adapt to the online world, ensuring the success of e-learning programs.
In order to offer truly personalised education, it is necessary for the instructor to learn about each student. Hence setting up an induction meeting with each student to learn about them, their learning style, their profiles and their personality will help the instructor adapt their teaching methodology and level of communication and interaction according to the individual’s preferences. These meetings can also be used to familiarise students with the aims, objectives and activities of the university and the methodology of online learning. The results of the research on student’s personality profile and their likelihood of completing an e-course show a significant relation. Through pre-course counseling and mentoring sessions, instructors are able to find out the personality type of each student in order to find innovative and creative ways to address the needs of each student and increase completion rates in online learning.

Research has been carried out on adapting the educational system to learner intelligence profiles (Kelly & Tangney, 2006). An individual’s personality is what determines who they are, the choices they make, how they appear to the world and the judgments they make. Thus the experiences that each individual has can be thought of as being determined primarily by their personality. True learning is a product of one’s experiences, interactions, mental processing and reflection more than simply acquiring knowledge. Hence it can be concluded that the personality of a student will have an effect on their learning. It is important then, to increase learners’ awareness based on their personality types and own learning preferences so that they can best take advantage of the range of materials. This can transform the learning culture of any organisation.

According to the Myers Briggs Type Indicator (Brownswood, 1987), individuals have been identified as having one of sixteen different types of personalities based on how one prefers to focus their attention, how
individuals find out about things and acquire information, how they orient
toward the outer world and their manner in which they make decisions.

According to Brownswood (1987), in terms of focusing their attention,
individuals are either Extraverts or Introverts. Extraverts get more energy
from being with others and get frustrated and irritable if they spend too much
time alone. They seek affirmation, confirmation, or verification of
themselves from others (external world). They are good at meeting people
and have great verbal skills, which they use, in meetings or to figure things
out by talking it over with others. Introverts, on the other hand, get drained
when spending too much time with people, particularly strangers and need
time alone to figure things out. They have to exert an extra effort to meet new
people and find the give and take of verbal interaction somewhat difficult to
keep up with. They have good writing skills and prefer presenting their ideas
in writing.

To get information, Brownswood (1987) says we use either our powers of
Sensing or more so just Intuition. Sensing deals with whatever is specific and
concrete, preferring reality to fantasy. These individuals do not like
complicated theory and have trouble seeing solutions to theoretical or
abstract problems, but are quick to find solutions to practical, concrete
problems. Intuition, on the other hand, goes beyond what is real and concrete.
Intuition is what an individual uses when focusing on meaning, possibilities
and relationships. They come up with imaginative solutions to complicated,
theoretical, or abstract problems. These individuals also enjoy theory and
abstractions.

The manner in which individuals make judgments is by using either the
Thinking function or the Feeling function. Those individuals that use
Thinking make decisions objectively and avoid discussing issues related to
emotions in their decision-making. Brownswood (1987) states that they
screen out of discussing their own emotions and the emotions of others and
only focus on the content involved in the decision. The decisions made by these individuals, link things by logical, impersonal constructs. Alternatively, those that use Feeling to orient to the outside world are more people-oriented in their decisions and make personal considerations when making decisions. According to Brownswood (1987) they understand human motivations and need to be appreciated or praised in decisions affecting them. They find it difficult to focus exclusively on the content of a decision and think of personal considerations and people's values when making decisions.

The individuals that are Judging work best when they can plan their work and follow the plan. They dislike interrupting their current project for a more urgent one and are time and deadline oriented. The Perceiving types start too many projects and have difficulty finishing them and tend to think there is plenty of time and feel time pressures late.

Hills (2003) states that type theory indicates that each of us has a dominant, auxiliary, tertiary and inferior function and what others mostly see is the auxiliary function the second most preferred activity. This will be either Thinking or Feeling so what others see is one of the Judging functions. Others either see the exercise of logic and decisions based on cause and effect or they see a need and willingness to balance values and beliefs of others to gain a harmonious judgment.

According to Hills (2008), it is essential to understand that our personality type preferences indicate our degree of comfort with a particular activity rather than competency or lack of it. The MBTI tool helps individuals understand and develop themselves resulting in the possibility of this theory being used to provide learners with a greater individualised experience through a mass media such as e-learning (Hills, 2008).

As described by Howarth (2007), personalised learning is the tailoring of pedagogy, curriculum and learning support to meet the needs and aspirations
of individual learners. Information is now collaborated with communities around the globe and personalisation of this information is important in that it gives learners the opportunity to learn in ways that suit their individual learning styles (Howarth, 2008).

Individuals even before they are born evolve differently due to a multitude of diverse factors. These variables span from physiological to socio-economic to cultural to psychological/ emotional and all these factors influence a child's access to and interaction with experience which in turn influences the way each individual learns (Dunn et al, 2007). Thus it is commonly known that individuals learn differently according to the time, the content of learning and the different motivators that affect learning. By allowing the learners to select a choice of material that matches their learning style and guiding them on how the activities are likely to suit them best, the content can be personalised by taking into consideration the individual and their respective needs. According to Hills (2008), in various situations learners are constrained to follow a specific path through the material and this is true for classroom learning as well. However through the use of e-learning, the learners are able to choose their own route through the material, provided that choice is built into the material.

According to Dupin-Bryant & DuCharme-Hansen (2005), the first step in developing a learner-centred system of web-based instruction is to determine the needs of the students which provides instructors with information necessary to select appropriate technology and instructional strategies to develop an online learning environment that is appropriate, responsive, and beneficial for both the learners and the instructor. Student needs should be assessed from five essential areas: computer skills, learning styles, available resources, learning outcomes, and prior learning experiences in web-based distance education courses in order to match students needs with the learning environment. Instructors need to gain an idea of students computer skills, their availability of resources and access to the internet, understand the
learner's desired outcomes from the course, their prior learning experiences and their learning styles in order to be able to plan course activities that complement student learning needs. The needs assessment plan should have a defined purpose, chosen assessment method and a developed timeline before conducting the needs assessment and analysing the data. Only then can the students' needs be individually focused on and matched with the instructional strategies (Dupin-Bryant & DuCharme-Hansen, 2005).

The researcher has identified certain opposing personality preferences as being more prominent in effective and ineffective e-learners. It was seen that the effective e-learners have the personality preferences of Introversion (I), Thinking (T) and Judging (J) as more prominent. On the other hand, the ineffective e-learners had the preferences of Extraversion (E), Feeling (F) and Perceiving (P) as being most prominent.

The high completion rate of online courses in individuals with the Introvert preference in their personality type implies that the current style of e-course delivery is well suited to Introverts as they are able to work alone without being exhausted with social interaction. This makes online courses and online education an interesting option for them where they can focus their energies on themselves and verify their thoughts from thorough inner introspection.

People with Thinking (T) preference are extremely logical in their thought processes and decision-making and do not allow emotional factors to creep into their decisions. Since they are capable of sometimes hurting people through what they say they probably prefer to keep themselves out of situations that call for social interaction. Thinking preference relates to how individuals use judgment and in judgment, decisions need to be made. Thus, those using Thinking (T) preference to make judgments will want answers quickly which makes online courses and online education a convenient option for them as they can get the answers as they need it without having to
try and waste time finding it out. They can also make decisions objectively only considering the consequences for themselves.

People with the Judging (J) preference are more geared towards hard work and enjoy being dedicated and completing their tasks and projects. They also like planning and taking on responsibility. They feel time pressures early and like to get things settled and finished, making them time and deadline oriented. Since online courses require the above characteristics of being able to motivate oneself and work autonomously whilst following a plan, it may seem like the Judging types are naturally made for online study as they are fond of work and perform up to capacity. In summary not much needs to be changed in the current format of e-learning to accommodate the effective e-learners.

Extraverts (E) are people oriented, they are possibly more geared to being in actual social situations where they are able to interact with people and build their decisions accordingly. They become easily bored, restless and lose interest if they spend a lot of time alone. The current online courses are mostly delivered asynchronously with little or no real-time interaction between the teacher and student. They like seeking confirmation from others and prefer verbal activities, which they are unable to do instantly in an asynchronous environment or discussion board. This explains their failure, in most cases, to complete online courses.

People who use the Feeling (F) preference for judgment need to be constantly motivated and shown appreciation. They also prefer to see things subjectively and consider emotions and others feelings when making decisions. The online courses are mostly delivered asynchronously making it difficult for instructors to be able to provide feedback and motivate their students as much as they would be able to in a physical learning environment. It is also hard for them to make decisions subjectively as they would have in a physical environment due to the lack of personal interaction.
People who use the Perceiving (P) preference are more spontaneous and open with little consideration given to rigid planning and responsibility. They like gathering information and like leaving decisions open to be changed depending on the situation. Online courses require dedication and motivation, which comes from an ability to get things settled and finished. The courses are also planned in a manner where the outcomes of questions and problems are often decided. This makes the Perceiving types feel like they do not have a lot of room to explore and make decisions accordingly. Appropriate changes are required to the current format of e-learning to accommodate these e-learners and their different personality preferences.

By proposing ways to adapt the system to match the personality profiles of e-learners, the researcher hopes to increase the retention and completion rate of students in e-courses.

The following diagram is a representation of the suggested ways of adapting the e-learning system. Included in the system are two modules: an information module for e-learners and a diagnostic tool for mentors of e-courses in order to help them in their e-mentoring initiatives.
Figure 6.10: Suggested Ways of Adopting the E-Learning System

- E-Learning Provider
- Content Provider
- Learner

- Diagnose Needs
- Choose E-Learning Content
- Personalize Learning
- Assess Learning Effectiveness
- Evaluate Learning Outcomes
Congratulations on choosing e-learning where you are in charge of what you learn, when you learn and how you learn. In saying this, it is important to understand the responsibility that comes with this freedom in order to get the most out of this experience whilst learning at the same time.

With the advances in technology, e-learning is a far more advanced choice of learning where answers are available at the click of a button and you become an active participant in the learning process rather than a passive recipient. This sense of interaction is the essence of online learning.

This site gives you an opportunity to fully understand yourself as a learner—your personality along with tips on how to become a better learner in the e-learning space.

Fig 6.11 The Front Page Of Information Module For E-learners
With the information collected, the researcher has designed a module that can be included in an institution’s website. The module for e-learners is mainly for those students who are considering enrolling in e-learning courses in order to explain to them further what e-learning is about and give them a glimpse of what to expect. It provides prerequisite information in order to help the e-learner discern if they are qualified for online learning. It also explains to them the role that personality plays in the success of completing an e-learning course and enables learners to find out more about their personalities.

Learners are explained what is required of them in e-learning in that self-motivation is an assumed pre-requisite to e-learning.

Further the module can be routinely updated with all the new improvements and advances in technology that are related to e-learning in order to enable learners to understand the changes and keep them in the loop. Finally it also offers a space for discussions and comments or any queries that learners may have. Incorporating the thoughts and views of Subject Matter Experts and Consultants also gives the e-learners a deeper insight into e-learning.
There has been a virtual explosion in e-learning with student interest on the rise. Successful completion of these e-learners however still remains a topic of contention. As stated by Einstein “We can’t solve problems using the same thinking as when we created them”.

Strategic and effective online mentoring is of prime importance in contributing to student success and should exist right from when a prospective e-learner displays interest in an e-course up to his/her successful completion in an e-course.

The personality of an e-learner has a significant effect on the learner’s effectiveness in any course. This module is a guide for mentors of e-learning courses in order to enable them to understand e-learners’ personalities and help them tailor e-courses to match their personality. This is the essence of learner-centred education.

Fig 6.12 The Front Page Of The Tool For E-learning Mentors
The personality of an e-learner has a significant effect on the learner’s chances of successfully completing an e-course. This module is a guide for mentors of e-learning courses in order to enable them to understand e-learner’s personalities and help them tailor e-courses to match their personality, thus focusing on learner-centred education.

The module explains covers the need to understand learner’s personality and the manner of tailoring the e-course to fit the e-learner’s personalities.

Since most of the problems of attrition come from the need for more motivation and interaction, ways and means of motivating the learners have been suggested.

A feedback and suggestions corner has also been incorporated as a discussion room for online mentors to come together through peer-to-peer learning and discussions to share ideas and try and find solutions to problems together.

Finally workshops and interviews presented by industry experts have also been included and updated on a timely basis in order for mentors to keep up with the changes and advances in e-learning technology and incorporate some of the methods suggested in their courses.
6.6.3.0 Adapting The System For Successful E-learners

The suggestion for e-learners that are Introverts (I) along with Thinking (T) and Judging (J) personality characteristics is not to involve them in online group activities such as discussion forums or teamwork as they work best individually. These types of learners could use tools such as blogs and discussion boards in order to express themselves better in a situation that does not involve a lot of interaction with others. This way they are also able to think about their answers before writing them. In terms of online course delivery, these learners could learn more effectively on their own, so courses that are delivered asynchronously would be better suited to their requirements and personality type. Since they are already effective with the current e-course format, they prefer the structured design of e-courses, which works in their favour.

6.6.4.0 Adapting The System For Unsuccessful E-learners

For Extraverts, it is important to create social presence online so that students still feel like they are part of a learning community and do not feel isolated but rather feel like they are in a space where they can interact with fellow students, share and discuss ideas and thoughts. The best way of doing this is through synchronous course delivery that encourages group learning. The courses should cater for spontaneous discussions and learning which gives the learners an opportunity to improvise their knowledge. It is also necessary to keep the instruction delivery exciting and unpredictable by including games and also extra material in form of pop-up boxes, snippets of detail and current facts on the topic delivered in a group setting.

As part of increasing the retention rate of students, it is important to include mentoring at every stage of the e-learning process. The diagnostic tool
developed for e-learning mentors enables them to gain an understanding of the e-learner’s personality and then tailor the format of the e-learning courses to keep e-learners away from giving up, by guiding them with appropriate choices and avoid placing them in situations that they would not feel comfortable in. This would work to increase the successful completion rate of e-learners. Finally in order to create a learning society of lifelong learners, it is important that the learner keeps an open mind to learning, avoids arrogance and the tendency to judge.

Braham (2004) lists some suggestions for learners to transform into lifelong learners. Firstly these learners need to surrender to the teacher, the process or the task at hand in order to acknowledge that they don’t know. Secondly they need to be curious about the subject and also approach life with the intention to learn. It is also important to suspend expectations and be focused on allowing the learning to unfold over time rather than following a predetermined schedule. The learner should also not be afraid to look foolish in order to learn and ask questions that simulate learning. It is also important for the learner to be humble and accept that they don’t know something, they need to seek the truth and also be ready and patient to oneself.
**E-MENTORING GUIDELINES**

The mentoring guidelines of e-learning courses based on student’s personality preferences are as follows:

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<thead>
<tr>
<th>1.0.0.0</th>
<th>EXTRAVERT (E)</th>
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<tbody>
<tr>
<td>a.</td>
<td>Course must include extensive <strong>online social presence</strong> through synchronous group learning format. The use of video technology will enable them to feel more like they are in a physical classroom and enable further interaction in the group, which they enjoy.</td>
</tr>
<tr>
<td>b.</td>
<td>Real-time discussion forums will encourage these learners to participate actively by getting quick answers to their discussion posts like in a traditional classroom.</td>
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<tr>
<td>c.</td>
<td>These learners have good verbal skills and prefer speaking. The courses should be based around a virtual classroom concept where they can speak their thoughts rather than writing it in discussion boards.</td>
</tr>
<tr>
<td>d.</td>
<td>They prefer group collaboration so courses should have extensive group work where they can interact with other students, share their thoughts, confirm and verify their concepts and queries with others.</td>
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<tr>
<td>e.</td>
<td>Peer assessment and tutoring techniques will be beneficial for these learners.</td>
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| f. | It is not advisable to leave these learners alone in asynchronous environments as they get bored and drained when they spend too much time alone. Synchronous environments give them a chance to
receive constant motivation and instant feedback from the tutors and their peers.

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<thead>
<tr>
<th>1.1.0.0</th>
<th>EXTRAVERT/THINKING (E/T)</th>
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<tbody>
<tr>
<td>a.</td>
<td>Excellent as leaders in group activities as they are frank and decisive.</td>
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<tr>
<td>b.</td>
<td>They like solving new and challenging problems but may neglect their routine assignments. Hence they should be constantly motivated with little assignments to solve certain mini-modules rather than long assignments on a single topic.</td>
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<tr>
<th>1.2.0.0</th>
<th>EXTRAVERT/ FEELING (E/F)</th>
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<tbody>
<tr>
<td>a.</td>
<td>Learners should be given course formats that cater for spontaneous discussions and learning. This gives learners a chance to improvise their knowledge as the progress as they do not like to plan in advance. <strong>Group format</strong> with these learners facilitating group interaction.</td>
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<tr>
<td>b.</td>
<td>They should be given the responsibility of group leaders whenever possible as they can present a proposal or lead group discussions with ease.</td>
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<th>EXTRAVERT/ PERCEIVING (E/P)</th>
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<tbody>
<tr>
<td>a.</td>
<td>Synchronous learning. Real-time interaction. Course format that has constant availability of <strong>extra material</strong>, e.g. pop-up boxes, snippets of detail and current facts on the topic delivered in a group setting.</td>
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<tr>
<td></td>
<td>INTROVERT (I)</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>a.</td>
<td>Introverts are generally difficult to get to know. Hence at the start of the course it is important for the tutor schedule a one-on-one initial meeting in order to get to know the learner and for the learner to be comfortable as well.</td>
</tr>
<tr>
<td>b.</td>
<td>These learners learn better in an Asynchronous course format. The courses should have discussion boards where learners can voice their opinions and participate in discussions. This gives them time to think and formulate answers and ideas in discussions groups.</td>
</tr>
<tr>
<td>c.</td>
<td>They are also not forced into interacting with others when they do not feel like it. However they should be given options to interact with others when they do experience the need to discuss their ideas and findings with their peers.</td>
</tr>
<tr>
<td>d.</td>
<td>Since introverts are mostly reserved, they might feel lost or out of place in discussion forums that are dominated by extraverted learners who like to argue their point and make their thoughts known. Hence a monitored discussion board would be the right choice where the learners can be given a turn to answer questions. This also gives them time to think before answering.</td>
</tr>
<tr>
<td>e.</td>
<td>These learners should be given more written tasks as they have good writing skills and prefer presenting their ideas in writing.</td>
</tr>
<tr>
<td>f.</td>
<td>Self-study activities that they can accomplish in their own time are appreciated by them. This enables them to get in touch with the introspective strength.</td>
</tr>
<tr>
<td></td>
<td>The course should have less peer evaluation and more self-evaluation or one-on-one with the tutor.</td>
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</tr>
<tr>
<td>2.1.0.0</td>
<td><strong>INTROVERT/THINKING (I/T)</strong></td>
</tr>
<tr>
<td>a.</td>
<td>Choose an Asynchronous course with <strong>one-on-one interaction</strong> with the tutor. These learners want quick answers to their queries. This ensures answers to their questions are available when required.</td>
</tr>
<tr>
<td>2.2.0.0</td>
<td><strong>INTROVERT/ JUDGING (I/J)</strong></td>
</tr>
<tr>
<td>a.</td>
<td>Learners should be given a <strong>plan/detailed timeline</strong> of expectations to work with. In this manner they are able to comfortably plan their activities and goals in order to help them achieve their learning objectives. Crossing off their progress against the timeline will be a way of motivating these learners to focus and complete their learning.</td>
</tr>
<tr>
<td>b.</td>
<td>These students make good leaders in group situations and add to the stability of a group. They should be encouraged to participate in group discussions although they may not be real-time or face-to-face (online) discussions. They prefer the structured design of e-learning courses. Judging have a greater tendency to focus their energies and thus apply themselves better.</td>
</tr>
<tr>
<td>2.3.0.0</td>
<td><strong>INTROVERT/FEELING (I/F)</strong></td>
</tr>
<tr>
<td>a.</td>
<td>Having feeling as a preference, these learners will want to run their ideas and thoughts past other learners from time to time. They should join discussion boards where they can pose questions about their thoughts and queries and gain an insight into what other students think about their ideas and concepts.</td>
</tr>
</tbody>
</table>
b. These learners should not be forced to be leaders in their groups or during group discussions. They shun disagreements and hence should be encouraged by tutors when they put their point across. Monitored discussion boards will work the best.

3.0.0.0 SENSING (S)

a. Sensing types work best with practical and concrete solutions. The course should be designed in a manner that does not involve lengthy theory or abstract problems. Rather it should focus on the specifics required for learners to study a certain module.

b. The facts should be stated first before stating the general points of the learning modules. Also when explaining doubts and queries, the tutors should give these learners answers with practical examples that are quick to grasp and do not require them to read pages of theory.

4.0.0.0 INTUITION (N)

a. These learners prefer seeing the bigger picture. The problems and assessments in the course should be designed so that the learners are given space to come up with imaginative ideas to theory. In this way they are able to concentrate on general points when explaining themselves.

b. The learners enjoy theory so the course should include extensive theory that they can analyse and come up with creative ideas to it.
6.7.0.0 Extending The Reach Of Learning

A learning society should be a society, which is full of individuals that not only have knowledge, but also are able to apply that knowledge. It would be extremely myopic to concentrate only on e-learning. There is a need to incorporate the learning needs of children in ordinary schools, those in rural areas and the ordinary citizen who without computers will not be able to avail of all the facilities that online learning offers. To include these areas, digital learning technologies in other forms are explored.

In schools currently, the static teaching methods result in teachers not being able to guide students completely on any given topic while the students themselves are restricted to printed text in their books. Also some syllabi are considered better than others. This can be solved with the introduction of commonality of standards in teaching. There is a need for greater integration of technology into education by converting classrooms into Smart classes. Training teachers in the use of technology in the classroom is deemed necessary in order to be able to integrate newer and better technologies into the classroom curriculum. Experts have emphasised the fact that new age technology should not be viewed as a hindrance in teaching. Rather, it should be seen as playing a supplementary and a complementary role to teaching learning methods. Educators can be trained towards the productive use of technology by demystifying educational technology solutions, so that it becomes simpler for educators to understand and grasp as believed by experts who suggest that the average educator is aware that there is a range of education and learning solutions available but never really have seen it demonstrated to them. By actively updating teachers in the latest classroom technologies, the schools are able to equip themselves to a point where they are able to prepare students for the modern working environment of the future.
When reviewing the current practices in classrooms, it can be seen that there exists an imbalance in the teaching input and learning/comprehension outcomes of students. The academic performance of students in most classrooms does not reach optimal levels, yet students are promoted to the next learning level. This means that there is a gap in the knowledge of students. Students need to achieve mastery learning.

**Mastery learning** is the concept that is based on John Carroll's interesting perspective on the meaning of aptitude (cited in Joyce & Weil, 2003). Carroll views aptitude as the amount of time it takes someone to learn any given material, rather than his or her capacity to master it. Thus each student can gain mastery over any subject if given the adequate amount of time. When the students are made responsible for their own learning, it helps more productive employment of professional teachers on tasks such as offering individual instruction instead of them focusing on administrative tasks, which can be more effectively done through the use of appropriate technology. According to Joyce & Weil (2003) modern instructional technology, especially the development of self-administering multimedia units and the application of programmed learning procedures, has encouraged curriculum developers to invent systems with a much greater degree of individualised instruction than is generally possible under conventional school organisations. IPI (Individually prescribed instructional program) is designed to enable each pupil to work at his or her own rate through units of study in a learning sequence, develop in each pupil a demonstrable degree of mastery, develop self-initiation and self-direction of learning, foster the development of problem solving through processes, encourage self-evaluation and motivation for learning (Lindvall & Bolvin, 1996 in Joyce & Weil, 2003). All these changes call for passion on the part of the teacher who appreciates technology and is ready to implement the flexible methods of course delivery. An example the implementation of mastery learning is seen in Fusion Academy And Learning Centre (FACL) in San Diego, U.S.A. The program at FACL addresses the needs of students,
who due to physical or circumstantial reasons do not fit into the mould of traditional private and public schools, by emphasizing an individualised one-to-one education. In this manner, the teachers are able to recognize each student’s talents and abilities individually by providing a completely customised program. In this way, the school adapts to the students needs and learning styles instead of forcing the student to adapt to the generalised, rigid approach in schools.

Turnkey solutions will be the future of learning in schools. The effective use of technology in classrooms can help students expand their learning through the use of Interactive boards. Research done by Apples Classrooms Of Tomorrow (ACOT) as highlighted by Stevens (2009) Director-Education Houghton Mifflin Harcourt, demonstrated that students who were provided with technology-rich learning environments continued to perform well on standardised tests but were also developing a variety of competencies not usually measured. Students explored and represented information dynamically and in many forms, became socially aware and more confident; communicated effectively about complex processes; became independent learners and self-starters; and knew their area of expertise and shared that expertise spontaneously. Using Interactive Learning Boards will help students learn above and beyond what they could have in a normal classroom. Interactive Whiteboards also enables students to capture the material written to be re-used as and when they need to learn. This enables students to grasp their knowledge better and understand clearer by having the ability of revisiting knowledge. The vast scope of information available in these interactive whiteboards enables the teachers’ knowledge gap to be minimised through the connection of classrooms to the wide knowledge on the Internet. Students are able to go above and beyond what is printed in textbooks with the entire Internet becoming their learning range. Products such as StarBoardHitachi, MagicStudio from Globus Infocom Ltd., Iken Interactive Systems from Axiom Educationhave all focused on introducing interactive learning boards.
in the market. The benefits for teachers as laid out by Hitachi include improved presentation by using ICT with the whole class, the potential to revisit or adapt previous work, facility to immediately respond to student needs by manipulating shapes and text and better planning and more effective lesson management, on a day-to-day and year-to-year basis. JIL Information Technology provides teaching and learning solutions that include Bharatavidya- which is a digital classroom teaching aid that offers high quality, well researched digital content, adaptable to any syllabi.

The Virtual 3D Interactive Models by Virtual Edutechnia Private Limited is Interactive 3D content for Interactive White Boards. The innovative programme enables students to acquire scientific concepts in Geography, Biology, and Chemistry by interacting with realistic 3D images on the computer screen. Students and teachers have total control over what they can do with models with the ability to zoom into any part of the displayed image, manipulate it and explore it from any angle. Designmate Private Limited has developed Eureka Virtual Laboratories and 3D stereoscopy, which lets the student experience virtual experiments and movies without the limitations of physical equipment, infrastructure and maintenance of laboratory facilities. It encourages comprehensive learning by allowing visual and kinesthetic information to be added to oral and written information, which was previously not addressed in online learning.

This application of digital education in classrooms should start right from the time the students are toddlers. Students should be encouraged to think independently and be given a chance to make decisions. By transforming learning from just looking at books to showing them digital objects, sounds, movement, etc they are better able to work towards self-learning and in turn better develop their senses too Digital Language Labs enable students to develop their language skills through better vocabulary, pronunciation, writing, communication, listening and comprehension skills. Students are able
to learn foreign languages at an economical cost to the school without the need for physical expertise. This learning is also effective, as it has structured content that is reusable. Incorporating learning games and toys in the classroom right from Kindergarten is important to prepare students for learning in the future. Innovative learning toys like laptops, puzzles and other toys that stimulate the learner's senses will lead to advance development of student's skills.

Real learning societies can form when each and every citizen is given an equal chance to learn. Shanthi S (2009) proposed the formation of Knowledge Cafes, which is a powerful medium of knowledge sharing in academia. These knowledge cafes act as an enabler for people to network, collaborate and share insights, experiences and knowledge resources through informal conversations. Learning in the future should see a push towards the formation of these knowledge cafes, or knowledge hubs where people can go in to learn, discuss and deliberate on any topic that they wish to gain information on. The setting up computer booths at different locations where people can go in to search information and update themselves will lead to a more knowledgeable society. Apart from the creation and consumption of knowledge, it is equally necessary to consider ways of efficiently managing knowledge. Thus learning should be integrated with knowledge management in order to extend learning to lifelong learning, which is especially significant in the current dynamic environment.

6.8.0.0 Knowledge Management In Learning Societies

Knowledge Management as described by Petrides & Nodine (2005) is a framework or an approach that enables people within an organisation to develop a set of practices to collect information and share what they know, leading to action that improves services and outcomes. Education's main purpose is to provide learners with an opportunity to participate creatively in
their skills development leading to the establishment of a knowledge society. Doctor (2006) suggests that to leverage critical knowledge, institutions need a knowledge sharing network that can meet the changing knowledge needs. Learning and knowledge management both work towards a common goal of creating learning societies through innovation, management and dissemination of information using knowledge management systems. Learning societies refer to learning that goes beyond the individual to include societies that are able to continuously learn and adapt to the changing environment. However as opined by Wang and Yang (2008) the challenge to learning in knowledge societies is not limited to how effectively learners can be helped to acquire knowledge and skills, but how they can be helped to learn how to manage, work creatively with ideas and to contribute to the creation of new knowledge. The use of digital technologies in learning helps in this advanced development of learners where the creative use of technology acts as an amplifier to learning. Wireless communications such as PDAs, notebooks, and smart phones enable new opportunities for communication and sharing of information and knowledge. Pervasive computing is the term coined to describe the tendency to integrate computing and communication into everyday life (Curran & Huang, 2008). Norris, Mason, Robson, Lefrere & Collier (2005) believe that this had led to the creation of environments in which ubiquitous computing devices are being embedded in everything from automobiles, to offices to clothing to appliances. Thus these advances in computing have changed the landscape of learning dramatically by turning every kind of private and public space into a venue for knowledge acquisition and profitable distribution.

It is common in the culture of school and universities to have teachers who are often not willing to share their knowledge with colleagues due to the fear that it would lead to a decrease in their prestige and value. This leads to ineffective methods of knowledge management as there are no defined methods of retention of personnel expertise. In order to turn schools into true
learning organisations, Friehs (2005) suggests that hidden knowledge should be mobilised; internal and external knowledge should be traced, transferred and integrated; a culture of experimenting and learning should be established in the organisation and knowledge processes should be reflected and evaluated. McGreal (2006) focuses on the need to share learning materials instead of wasting time and money on designing several similar lessons for online delivery. McGreal proposed the development of a few well-designed multimedia Learning Objective (LOs) that could be shared and used in thousands of courses. These LOs are identified by metadata which is used to describe what the LO contains. The LOs are stored in a Learning Object Repository (LOR), which is extremely useful in making information readily transferrable across course boundaries. This method of content development promotes collaborative learning and the ability to access the best quality content. Doctor & Ramachandran (2006) believe that it is a real benefit for teachers to have access to additional material when students react unexpectedly to the planned course through differences in teaching styles and methodology of different faculties teaching the same subject brings variety and creativity to a classroom. Online courses can then be designed as a collection of LOs instead of whole, inseparable, long courses. This improves learning efficiency by enabling learners to be more easily directed in their learning through the categorisation and standardisation of learning units. LOR ensures the sharing of learning material within and across institutes by optimising the value of resources created within educational institutions (Doctor & Ramachandran, 2006).

By making the knowledge flow in schools more transparent, the organisations are able to work together to systematically generate and store knowledge. However, the question of transforming this tacit knowledge into explicit knowledge is an area of concern for most organisations. It should be realised that technology is important in the knowledge management framework, however it ultimately comes down to the people to drive
knowledge creation and sharing practices. Learning societies encourage interaction and knowledge flows. The knowledge that emerges from this interactivity, the communities of practice and from the troves of tacit knowledge is termed as e-knowledge (Norris, Mason, Robson, Lefrere & Collier, 2005). The use of e-learning in learning communities facilitates the creation of e-knowledge by assisting members to come together and indulge in vibrant discussions. The experts believe that the future of knowledge management will see the sharing of both information and control of rights to information. Norris, Mason, Robson, Lefrere & Collier (2005) proposed that the current LOs that are difficult to capture will change to automated capture and update of protocols to create LOs that are substantially less expensive. The information created in learning societies will assist in this automated capture of tacit knowledge through the discussions, student blogs, wikis and interactions that take place within the communities of practice. Grid Computing is another technology as mentioned by experts that is set to change the knowledge management and sharing. Mason, Norris & Lefrere (2005) explain that the potential of grid computing is in providing on demand access to levels of computational resource that is otherwise only available to the privileged few with direct access to super computers. In this manner expert knowledge can be explored and accessed by novices, with certain pre-set levels of trust and collaboration (Mason, Norris & Lefrere).

Since the future of learning is about reusable, sharable knowledge through structured knowledge transfers, it is important to consider the role of knowledge management in learning societies. The coming together of people and technology in an effective manner in learning societies enables the flow of knowledge and encourages the creation of new knowledge through the advances in technology in relation to knowledge management. Although the future in terms of knowledge management in learning is not clearly defined there is a need to focus on ways to make it part of the education system in order to convert the diversified structure of learning to a more centralised
system based on sharing and openness. This is when the true power of technology to improve the quality of student learning in an economical and sustainable manner will be realised.

6.9.0.0 Towards A Learning Society Of The Future

“Education is not preparation for life; education is life itself” (John Dewey, 2009)

With the move towards e-learning and the inclusion of people of all ages, education in the future can be seen as moving towards being more open-ended where one will be learning for life. Situations and circumstances are constantly changing whether it be economically or personally and having an adaptable and flexible outlook where one is prepared to learn continuously in order to comfortably adapt to these changes is important for the sustainability of both the individual and the environment.

Torsten Husen had a futurological approach in his 1974 book, “The Learning Society”, claiming, Education will not have any fixed points of entry and “cut-off” exits. It will become a more continuous process within formal education and in its role within other functions of life (Ranson (1998) as cited in Smith (2000). Thus the concept of ‘going to school’ for a certain number of years in ones life could be an obsolete idea in the years to come and the present day schooling system is changed to the formation of societies of education where people choose to go according to what they wish to learn and can constantly choose a new field of learning and knowledge that they wish to acquire. Changes would even be brought about in the type of education being imparted to the learners. The Young citizens of Australia when asked about the future proposed “a system of GQ – like IQ, a global intelligence quotient. GQ would be a measure of a person’s global
intelligence, incorporating skills such as language fluency, historical and cultural understanding of other countries, and overseas travel” (Evans & O’Connor, 2009). Thus in all aspects of future learning it can be seen that it is gearing more towards the breaking down of any barriers of time or space or established concepts of what education should be like to what education could be like.

Rabindranath Tagore (2000) spoke of his vision of education for the future: “Where the mind is without fear and the head is held high; Where knowledge is free; Where the world has not been broken up into fragments by narrow domestic walls; Where words come out from the depth of truth; Where tireless striving stretches its arms towards perfection; Where the clear stream of reason has not lost its way into the dreary desert sand of dead habit; Where the mind is led forward by Thee to ever-widening thought and action”

Finally, in creating a learner centred education society, the goal will be achieved when individuals feel empowered to choose their destiny and not be stuck with the idea that they are limited to what they are pre-destined to do. They should be confident enough to dream the impossible and go forward without the slightest doubt of their abilities.

6.10.0.0 Conclusion

In order to combat the high illiteracy rates, especially in India, efforts to create learning societies and include people from all parts of the nation, irrespective of geographical boundaries have been suggested. This will stop the further accretion into the pool of illiterate persons through inclusion education and learning efforts that have been tailored to people’s needs with a wide reaching aspect. True transformation in education can only be experienced when all the stakeholders – students, teachers, parents, communities and the government engage and collaborate with each other.
The future of education and learning will see the development of richer learning communities where people come together to interact with each other and share knowledge. The use of ICTs in these learning societies facilitates structured program delivery; knowledge transfer and the formation of networked learning environments take care of the aspirations of the academic community. At the same time, institutions need to find the right balance between altruism and economic feasibility. Universities and other learning institutions need to change their culture to make the provision and use of online courses common practice and not something that is removed from the traditional methods of education. Using the power of technology, learning can be changed from instruction based on the self-perception of teachers to addressing the real needs of the learners. Ultimately the level of adoption will come down to the individual mindset, immediate needs and prior knowledge, atmosphere and society that student belongs to. It is about learning and not about the technology. A computer is just an object. It cannot replace a person. We need to accommodate diverse learning environments, whole class, small group, individual and distance learning environments. Thus by encouraging positive learning structures based on independent learning, the students can be groomed to face learning in the future which will be rapid and constantly updated based on the dynamic nature of the technology, information systems and environment.