**Education as a process**

Education is a process of gaining knowledge, acquiring and implementing skills and attitudes to lead a productive life in the society. Success of the education depends on way of training of a child in school, home and society. It is hoped that a teacher can mold the potentials of the child to the best through the best educative process. Educative process can be divided into four: bipolar, tripolar, multipolar and moreover, lifelong process.

Bipolar process

According to this view, education consists of two persons; teacher and student. Here, teacher imparts knowledge and student acquires it. There should be cooperation and better understanding between them. Teacher should know the level of a student and student should have interest to learn with teacher.

Tripolar process

Education is the process of an interaction of teacher, student and society or social environment. It is necessary to consider societal changes in education. A teacher should update the technological changes, revise the curriculum accordingly to develop the students as productive and useful persons to the society.

Multipolar process

The new concept of education is influenced by teacher, student, social environment and other several factors. The education is more flexible than past, student centered and highly depends on technology. The student can access knowledge through any modes including e-learning. However, no one could explain precisely on type of factors influenced on education. It ranges from past experiences to upcoming technologies.

Lifelong process

Education is the process of training a man throughout life and doesn't have an end. Education, at present, aims at continuous, but changing process to achieve broader goals of society.

**Characteristics of educative process**

**Knowledge embedded**

Based on application of skills

Needs revision of curriculum based on needs and demands of society

Purpose oriented

Planned activity

**The Bi-polar Theory of Education**

Adams considered the relation between teacher and pupil as bi-polar. In his words, “there must always be a teacher or educator pole, and a pupil of educand pole.” A child becomes a student only because of his relationship with the students. We should not think one pole to be passive, another to be active. In the process of education, the teacher is active while giving instructions and the pupil in active while receiving it. Listening to the instruction of a teacher involves an activity of thought and imagination. In be-polar theory of education, the teacher is active in teaching and the students are active in learning.

The Uni-Polar Theory of Education

Adams pointed out that the activity of the educator and educand pole comes to a point of redistribution when the child tries to acquire certain skill and knowledge or develops a pattern of behavior. He becomes a partner of the teacher and tries to educate himself. Now, the teacher is nothing but a means by which the child educates himself. He is no more in the foreground. Thus education becomes uni-polar.

Process of education can interpreted as ‘subjective’ and ‘objective’ ‘Education becomes objective, when the student only responds to the stimulus of the teacher without unable to enter the purpose of the teacher by making it making it his own or by opposing it at times. This way never happens in case of some pupils. Hence this process is objective bi-polar . In true sense, it is uni-polar as regards the experience of most educands. In the words of Adams; “In the experience of most educands education is bi-polar throughout, in both subjective and objective spheres. It is true that at the highest point in the educational experience of the intelligent educand, there comes a time when the process appears to be uni-polar, for the educand is now fully aware of his own desires in matter of education and does all his own educating, using the external educator merely as a means. Yet even at this stage, and while the educated thinks that he is complete command of the whole educational process, he may be under education in way that he does not suspect. A school caption, a school perfect, a university student is often in this position. He thinks he is merely using his tutors as means with which to educate himself, while these tutors are deliberately molding his character”

The Tri-Polar Theory of Education

Sri J.E. Adamson proposed a tri-polar theory of education. According to him, the essence of education consists in adjustment which he describe as bringing the individual and his word into relation, the word of the individual is in reality an his words, nature, society and morality, which correspond to be activities of knowing, feeling and willing in human experience. The process of adjustment has both passive and active aspects. The child is molded by his environment but he is also to mold it.

Adams believed that there is definite though variable relation between the educator and the educand. Adamson, on the other hand, establishes a direct relation between the educand and his environment in which the educator is an external factor. In the word for Adamson, “we now come to a point of fundamental importance. It is the position and function of the teacher in relation to his business of adjustment which we take to be the end and essence of education. In the process itself, there does not seem to be any room for him. On the other hand, there is the individual and the other three worlds, and in the miracle of experience they, subjective and objective, have become one; while adjustment in but the elaboration and extension of this unity. The whole business is between the individual and his world, and the teacher is outside it, external to it”.

Thus the bi-polar relation is not between the teacher and the pupil but between the pupil and has environment (worlds).

FACTORS INFLUENCING EDUCATION

A.Philosophical factors

explains=>

->why should a child be educated?

->for what to be educated?

->how to be educated?

->by whom to be educated?

influences=>

=>the aim of education

=>curriculum

=>text book

=>methods of teaching

=>discipline

=>teacher-pupil relation

=>aim of education is related to aim of life

->a totalitarian state will educate it's citizens for common good rather than for

individual good

->in democratic countries aim will be to make good citizens according to

democratic philosophy of life

=>the curriculum is constructed with the objectives of education

->objectives of education is guided by the aim of life

->aim of life has a heavy bearing of philosophy

=>the content and mode of presentation of the textbook is determined by

the values of life fixed by philosophy

=>in a totalitarian country the method of teaching will be teacher centered

->in a democratic setup it will be pupil centered

=>discipline of the educational institutions will reflect the philosophy of that age

=>a teacher who is well aware of the philosophy of life and it's impact on

education will succeed in his job.

B.Socio-cultural factors

->the culture of the society determines the pattern of education

->a society of spititual pattern of culture promotes the attainment of moral

and eternal values of life through education

->a society of meterialistic pattern emphasises the attainment of meterial values

->influences aim of education,curriculam,methods of teaching,discipline and textbook

->preservation,transmission and transaction of culture is the function of education

->acculturation and enculturation is effectively possible by education

->education and culture contribute to each other

->components of culture are the cells of education

->"culture is the lifeblood of the body of education"

C.Economic factors

->highly effecting factor

->a poor country can never introduce a highly expensive technological

device in the classroom

->education facilitates economic progress of the state

->economic condition of the state facilitates educational development

->educational achievement of an individual is limited by the financial

background of the family

->the quality of education is decided by the economic development of the society

->a poor country can not provide costly educational facilities to all it's citizens

->the' free education','common education','social justice','education for all'

and 'equality in educational opportunities' can be achieved with

economic efficiency only

->expenditure on education is an investment by the state

->industrial growth,agricultural growth etc.. help economic growth and

they influence educatioanal development

->the education needed by industrialised and agrarian communities will be different

->modern industry is highly technical and science based

->economic status influences the curriculum,method and also the infrastructures.

D.Political factors

->the political administration controls all educational affairs of the state.

=>a totalitarian state will mould the mind of children to an uncritical

acceptance of the will of the state

->education will be directed to secure mechanical discipline,

duty and unquestioned obedience.

->no academic freedom even in higher education

->no participation of local community in the education of their children

=>in communism education will be a national concern

->individual will have less freedom in the selection of courses

->academic freedom will be tolerated only with in the limits of communist doctrines

=>in democratic setup the society has major role in providing educational facilities

->education is considered as' the birthright of all' in democracy

->society has the responsibility to provide education according to

individual tastes,abilities and aptitudes

->universal education is a necessity in a democratic society

->education aims at improving vocational and practical efficiency

->inculcate respect for the national flag and national anthem

->exeptional children are given special instruction

->ample opportunities for phisical strength and mental discipline.

E.Historical factor

->education has developed along with human civilization

->education has a long past,a functioning present and a never ending future

->historical factors conect past with present to get energy for effective

functioning of education

->historical factors give a universal outlook to education

->indian education system is based on the british period education of

LORD MECAULEY

->the vedic,budhist,jainist and islamic education have influence in

present system of education.

A.Formal education

->it is a planned activity

->it is purposive

->it is organised and systamatic

->has predetermined and definite aim

->starts and ends at a particular stage

->imparted through formal lessons

->definite time

->definite syllabus

->the taught is aware of the process

->puts some mental strain on teacher and taught

->organised by some agency

->examination oriented system

->individual is loaded or stuffed with knowledge by the teacher

->it is rigid

->formalities to be followed in the age of admission,curriculum,syllabus,textbook,

timetable,methods of teaching,qualification of teachers,inspection,

supervision,examination etc........

->certificates,degrees or diplomas are awarded

->prevalent in schools,colleges and universities

->hierarchically structured

->chronologically graded

->legally institutionalised

->it is conceived in terms of traditional system

->planned for the modification of behaviour with a particular end in view

->regular and continuous programme.

B.Informal education

->received in an indirect manner

->all life experiences provides learning

->it is accidental

->'life is education and education is life'

->process from womb to tomb

->gets information from agencies like family,school,peer group,community

and friends

->experiences from the interactions with environment

->it is continuous and life long.

->it is unplanned

->it is non purposive

->un organised and un systamatic process

->no pre determined and definite aim

->no formal lessons

->no definite syllabus and period

->the taught is not aware of the process

->no mental strain as in formal education

->learns all time,from every event and from every experiences

->it is incidental process

->it has no anticipated goal and formal planning

->experiences are unstructured and indefinite

->environment has more effect upon the educant

->behavioural modification is spontaneous,without any conscious effort for it.

C.Non-formal education

->new concept after the report-'learning to be'

->it is formal as well as informal

->it is highly flexible and lenient

->it is carried on outside the established formal system

->it is relevent to the needs,requirements abilities and capacities of the individual

->not so rigid as formal education

->it is ment for the school drop-outs,the employed or working persons,those

living far away from the educational institutions,house wives,retird persons

and manyother looking for information,knowledge and training

->it is open ended

->it has flexible points of entry and exit.

->it has flexible curriculam

->it is a process of sharing and exploring together with full learner participation

->meeting the individuals felt needs

->it is self motivated

->it is participatory

->may or maynot insist examination and certification.

->eg.

->continuing education centres

->distance education

->correspondence courses

->open university, etc....

Formal Education:

Formal education is consciously and deliberately pre-planned, organized and given for the modification of behavior with a particular end in view. Formal education is undertaken in institutions, specifically established and maintained for the purpose such as schools and colleges. It is limited to a specific period and it has well-defined curriculum. It is given by qualified and trained teachers, Formal education observes strict discipline. Formal education can be primary, middle, secondary, higher secondary level in the school and undergraduate, graduate and post graduate level in the colleges and university which can be in Art, Science, Commerce, Technical and Professional area. With growth of civilization and with the advances in the field of science and technology, the accumulated fund or knowledge and skills has become more and more complex and with it the need for formal education has also become more pressing and widespread..

\_

Formal Education is:

1. Institutional activity.

2. Chronologically graded hierarchically structured.

3. Uniform.

4. Subject oriented.

5. Full time.

6. Leads to certificates, diplomas, degrees

\_

Informal Education:

Informal education is not pre planned. It is quite incidental. It is type of education which the child gets while moving and living in the community with other persons; he/she picks up the way and habits of the adult members of his community and tries to adopt them. Such an education is not imparted by any organized agency; it is casual and gained through daily experiences and activities. Thus education starts from the very birth of a child and continues till death. Informal Education is a general term for education outside of a standard school setting. Informal Education is the wise, respectful and spontaneous process of cultivating learning. It works through conversation, and the exploration and enlargement of experience. It can refer to various forms of alternative education, such as:

•Unschooling or homeschooling

•Autodidacticism (Self-teaching)

•Youth work

\_

What we are talking about as ‘informal education’ may well be described in Scotland as community education or community learning, in Germany as social pedagogy, and in France as animation. In daily life we all act as educators from time to time. But there is also a need for specialists – educators who are skilled in, and committed to, working with people in everyday situations so that life can be more fulfilling and all can share in its fruits. Informal Educators work in many different kinds of settings with individuals and groups who choose to engage with them. The mass media (including television, video games, magazines, etc.), museums, libraries, zoos, after-school groups and other community-based organizations and cultural institutions offer forms of informal education.

\_

Informal learning is one of three forms of learning defined by the Organisation for Economic Co-operation and Development (OECD). Informal learning occurs in a variety of places, such as at home, work, and through daily interactions and shared relationships among members of society. For many learners this includes language acquisition, cultural norms and manners. Informal learning for young people is an on-going process that also occurs in a variety of places, such as out of school time, in youth programs at community centers and media labs. Informal learning usually takes place outside educational establishments, does not follow a specified curriculum and may originate accidentally, sporadically, in association with certain occasions, from changing practical requirements. It is not necessarily planned to be pedagogically conscious, systematic and according to subjects, but rather unconsciously incidental, holistically problem-related, and related to situation management and fitness for life. It is experienced directly in its “natural” function of everyday life and is often spontaneous.

\_

Hawkings (2004) states that it is far too simplistic to assume that learning is either formal or informal. At the very least, both learner affiliations and teaching/learning activities may each be divided into formal and informal, providing a two-by-two matrix one:

Activity

Affiliations formal informal

formal Lectures for groups of students Free-choice exploration of exhibits

informal Adult education courses Interactions with gallery characters

\_

Informal learning can be characterized as the following:

•It usually takes place outside educational establishments;

•It does not follow a specified curriculum and is not often professionally organized but rather originates accidentally, sporadically, in association with certain occasions, from changing practical requirements;

•It is not necessarily planned pedagogically, systematically according to fixed subjects, test and qualification-oriented, but rather, either unconsciously incidental or consciously intended intuition, holistically problem-related, and related to actual situations and fitness for life;

•It is experienced directly in its “natural” function of everyday life.

•It is often spontaneous and creative.

•It is a key component to an alternative learning system coined, Learning by Observing and Pitching-In (LOPI), which is highly used by the indigenous of the Americas, but not by all.

\_

Essential to a child’s early development:

Learning your mother tongue is an excellent example of informal learning. Imagine if a child were not exposed to any language for the first 5 years. How difficult would that child’s development become? Everything a young child learns at home is informal learning, from how to brush their teeth to how to say the alphabet to good manners. Without informal learning, we would never be able to cope in a formal learning environment.

\_

Essential to an adult’s lifelong learning:

Informal learning is a lifelong process. It does not end when a child enters school and the formal system “takes over”. On the contrary, children continue to learn at home. As we get older, we learn from our friends. As we enter the workforce, we learn from our co-workers. Into retirement, we still learn from friends and also from those younger than us. An adult learning to read and write from a volunteer literacy tutor is one example. A retired office worker learning from her grandson how to use an iPad is another example. Informal learning is what keeps us vibrant, mentally active and interested in the world around us, as well as our own development. Just because informal learning cannot be quantified easily does not mean that it is not worthwhile – or even essential to our development and growth as human beings.

\_

Self-directed learning:

Autodidacticism (also autodidactism) is a contemplative, absorbing process, of “learning on your own” or “by yourself”, or as a self-teacher. Some autodidacts spend a great deal of time reviewing the resources of libraries and educational websites. One may become an autodidact at nearly any point in one’s life. While some may have been informed in a conventional manner in a particular field, they may choose to inform themselves in other, often unrelated areas. Notable autodidacts include Abraham Lincoln (U.S. president), Srinivasa Ramanujan (mathematician), Michael Faraday (chemist and physicist), Charles Darwin (naturalist), Thomas Alva Edison (inventor), Tadao Ando (architect), George Bernard Shaw (playwright), Frank Zappa (composer, recording engineer, film director), and Leonardo da Vinci (engineer, scientist, mathematician).

\_

Research and data:

Merriam and others (2007) state: “studies of informal learning, especially those asking about adults’ self-directed learning projects, reveal that upwards of 90 percent of adults are engaged in hundreds of hours of informal learning. It has also been estimated that the great majority (upwards of 70 percent) of learning in the workplace is informal (Kim, Collins, Hagedorn, Williamson, & Chapman, 2004), although billions of dollars each year are spent by business and industry on formal training programs” (p. 35–36). Both formal and informal learning are considered integral processes for Virtual Human Resource Development (Bennett, 2009), with informal learning the stronger form.

\_\_

Non Formal Education:

A new concept has developed recently after the publication of report of the international commission on the development of education, learning by the non-formal education. The commission feels that in-spite of vast financial resources being spent on education, vast majority of people do not get the desired education. They may find it difficult, due to their preoccupation in earning, to join formal education, to join formal educational institutions during specific working hours. The commission therefore suggests that alternative arrangements should be made for those who cannot attend formal institutions. For them we may have postal courses or correspondence courses. People desirous of learning should have an opportunity of studying privately in their leisure hours getting guidance through postal tuition, contact programs, vacation programs, summer institutes, broadcasting programs television programs, satellite instructional programs, teaching machines, programmed lessons and like. Open universities could be started with country wide enrolment of working class, who can study at leisure and appear at examination of the university. It falls within the formal and informal types of education. It is a flexible system. The characteristics are –

•It is intentional, incidental and given outside the formal system, i.e., school.

•It is consciously and deliberately planned, organized and systematically implemented.

•It is an open system of education without rigid rules, regulations and fixed stages or time schedule.

•It is a life-long process, integrated with life and work. It is life oriented and environment based.

•It is intended for all ages.

•It is programmed to serve the needs of identified groups of different categories If and when they need.

•It necessitates flexibility in designing the curriculum and the scheme of evaluation.

•Social or adult education, distance education are the examples of non-formal education.

\_

Fordham (1993) suggests that in the 1970s, four characteristics came be associated with non-formal education:

•Relevance to the needs of disadvantaged groups.

•Concern with specific categories of person.

•A focus on clearly defined purposes.

•Flexibility in organization and methods.

\_

The disadvantaged:

‘Disadvantaged’ means all those social groups who are either under-represented in formal education or who are considered failures within it. Such educational disadvantaged also correlates closely with other kinds of social deprivation, including poverty, unemployment and low social status.

\_

Goals/objectives of non-formal education:

1. Provides functional literacy and continuing education for adults and youths who have not had the advantage of formal education or who did not complete their primary education.

2. Provide functional and remedial education for the young people who did not complete their secondary education.

3. Provide education to different categories of graduates to improve the basic knowledge and skills.

4. Provide in-service, on-the-job, vocational and professional training to different categories of workers and professionals to improve their skills.

5. Give adult citizens of different parts of the country necessary aesthetic, cultural and civic education for public enlightenment.

\_\_\_\_

Difference between Formal Education and Non-Formal Education:

Formal Education Non Formal Education

Target Group Mainly young, Universal, Compulsory, Selective Mainly adults, those interested, voluntary and open

Time Scale Full time and Primary activity Part time and Secondary activity of participants

Relevance Separate form life, In special institution, In sole purpose buildings Integrated with life, In the community, In all kinds of settings

Programme Run by professionals, Excludes large parts of life It is participatory, Includes large parts of life.

Curriculum One kind of education for all Education to meet learner

Methods Teacher centered, Mainly written Learner centered, Much is Oral

Objectives Conformist Promotes

Independence Set by teachers, Competitive Set by learners and Controlled by Learners

Orientation Future Present

Relationship Hierarchical Egalitarian believing in Equal Right

Validation Terminal at each stage, Validated by education Professional Continuing validated by learners

\_

Importance of non-formal education:

Education plays an important role in development. Out of school programmes are important to provide adaptable learning opportunities and new skills and knowledge to a large percentage of people who are beyond the reach of formal education. Non formal education began to gain popularity in the late 1960s and early 1970s. Today non-formal education is seen as a concept of recurrent and lifelong learning. Non formal education is popular among the adults specially the women as it increases women’s participation in both private and public activities, i.e. in house hold decision making and as active citizens in the community affairs and national development. These literacy programmes have a dramatic impact on women’s self-esteem because they unleash their potential in economic, social, cultural and political spheres. According to UNESCO (2010), non-formal education helps to ensures equal access to education, eradicate illiteracy among women and improve women’s access to vocational training, science, technology and continuing education. It also encourages the development of non-discriminatory education and training. The effectiveness of such literacy and non-formal education programmes are bolstered by family, community and parental involvement.

\_\_\_\_\_\_\_\_

Out-of-school learning especially school trips as overlap between formal, non-formal and informal education:

Learning outside the classroom is defined as “the use of places other than the classroom for teaching and learning”. Some researchers prefer to call it outdoor classroom, which means the “spaces where students can experience familiar and unfamiliar phenomena beyond the normal confines of the classroom”. These outdoor classrooms can be everywhere, such as school playground, local community, parks, museums, science centres, and field study centres. In short, learning outside the classroom is the learning activity that takes place in anywhere only except the school classroom. Teachers highlight the value of learning outdoors as it provides first-hand experiences, stimulates interest and motivation in science, gives meaning to learning and its interrelationships, observation and perception skills, and personal/social development. Consequently these external site visits may provide students a worthwhile and beneficial complement to their classroom studies. The benefit of out-of-school learning for children is obvious as recent research proved that children who are engaged in learning outside the classroom usually perform better in school subjects, have more confidence and self-esteem, and show more greater social competence and environmental responsibility (Malone, 2008).

Education and society:

Education is sees as a means of cultural transmission from one generation to another in any given society. Society is defined as the whole range of social relationships of people living in a certain geographic territory and having a sense of belonging to the same group. The relationships between the two concepts are so strong that it is not possible to separate them because what happens to one affects the other. Educational institutions are micro-societies, which reflect the entire society. The education system in any given society prepares the child for future life and instils in his those skills that will enable him to live a useful life and contribute to the development of the society. Education as a social phenomenon does not take place in a vacuum or isolation; it takes place in the society and this normally begins from the family, which is one of the social institutions responsible for the education of the child.

\_

Symbolic Interactionism and School Behavior:

Symbolic interactionist studies of education examine social interaction in the classroom, on the playground, and in other school venues. These studies help us understand what happens in the schools themselves, but they also help us understand how what occurs in school is relevant for the larger society. Some studies, for example, show how children’s playground activities reinforce gender-role socialization. Girls tend to play more cooperative games, while boys play more competitive sports.

\_

Sociology of education:

Education is a social institution that sociologists are very interested in studying. This includes teaching formal knowledge such as reading, writing, and arithmetic, as well as teaching other things such as morals, values, and ethics. Education prepares young people for entry into society and is thus a form of socialization. Sociologists want to know how this form of socialization affects and is affected by other social structures, experiences, and outcomes. Sociology of education is a field that focuses on two separate levels of analysis. At a macro-level, sociologists work to identify how various social forces, such as politics, economics, culture, etc., creates variation in schools. In other words, what effects do other social institutions have on the educational system. At a micro-level, sociologists look to identify how variation in school practices lead to differences in individual-level student outcomes. That is, when schools have different teaching methods or have different practices, how does that affect the individual students and what are the individual outcomes. A classic study by sociologist James Coleman done in 1966, known as the “Coleman Report” looked at the performance of over 150,000 students and found that student background and socioeconomic status were much more important in determining educational outcomes than were differences in school resources, such as per pupil spending. He also found that socially disadvantaged black students benefited and did better in school when they were in racially mixed classrooms rather than black only classrooms. This ignited controversy that still continues today.

\_

Major Sociological Theories of Education:

Like any other topic in sociology, the three major theoretical perspectives (functionalism, conflict theory, and symbolic interaction theory) each have different views on education:

1. The functionalist perspective argues that education serves many important functions in society. First, it socializes children and prepares them for life in society. This is not only done by teaching “book knowledge,” but also teaching the society’s culture, including moral values, ethics, politics, religious beliefs, habits, and norms. Second, education provides occupational training, especially in industrialized societies and most jobs today require at least a high school education, and many professions require a college or post-graduate degree. The third function that education serves, according to functionalist theorists, is social control, or the regulation of deviant behavior. By requiring young people to attend school, this keeps them off the streets and out of trouble.

2. The symbolic interaction view of education focuses on interactions during the schooling process and the outcomes of those interactions. For instance, interactions between students and teachers can create expectations on both parts. The teacher begins to expect certain behaviors from students, which in turn can actually create that very behavior. This is called the “teacher expectancy effect.” For example, if a white teacher expects a black student to perform below average on a math test when compared to white students, over time the teacher may act in ways that encourage the black students to get below average math scores.

3. Conflict theory looks at the disintegrative and disruptive aspects of education. These theorists argue that education is unequally distributed through society and is used to separate groups (based on class, gender, or race). Educational level is therefore a mechanism for producing and reproducing inequality in our society. Educational level, according to conflict theorists, can also be used as a tool for discrimination, such as when potential employers require certain educational credentials that may or may not be important for the job. It discriminates against minorities, working-class people, and women – those who are often less educated and least likely to have credentials because of discriminatory practices within the educational system.

\_

Social functions of education:

Schools ideally perform many social functions in modern society. These include socialization, social integration, social placement, and social and cultural innovation. Education plays a large part in the socialization of children into society. Most American children spend the required 180 days each year in school from the first grade through high school. Most of a child’s day through these years is devoted to activities involving school such as attending classes, doing homework, and participating in extracurricular activities. The school format is designed to teach children to be productive members of society. Schools bear most of the responsibility of preparing young people for the working environment. Children learn punctuality, time management, and to respect the authority of their teacher which prepares them to respect their boss. The curriculum also plays an important role. A class in civics teaches a child to be a good American, and a class in home economics teaches a child how to operate a household. Most socialization, however, occurs beyond the curriculum. Extra-curricular activities such as student government, being a part of a school newspaper, or being in a business club provide anticipatory socialization for adult jobs.

\_\_

Social benefits of education:

On average across 15 OECD countries, a 30-year-old male tertiary graduate can expect to live another 51 years, while a 30 year-old man who has not completed upper secondary education can expect to live an additional 43 years. A similar comparison between women in the two educational groups reveals less of a difference than that among men. In 27 OECD countries, on average, 80% of young tertiary graduates say they vote, while only 54% of young adults who have not completed upper secondary education do so. The difference in voting rates by level of education is much smaller among older age groups. Education can bring significant benefits to society, not only through higher employment opportunities and income but also via enhanced skills, improved social status and access to networks. By fully recognising the power of education, policy makers could better address diverse societal challenges.

\_\_\_\_\_\_

Social change refers to the modifications in the organization and behavior of the group expressed in its laws, institutions, customs, modes and beliefs. When change is supposedly for the better it becomes progress which is essentially an evolutionary concept. The term social change might imply changes in social attitudes, behavior, customs, habits, manners, relations and value of people, in social institutions and structures, in the ways or styles of living.

Importance of Information Technology in Education:

Both education and learning are life time processes, they have no limit on when to start and stop. It is very important to make education accessible at any time by everyone; this will help in reducing on the level of illiteracy. Information technology has the ability of speeding up information delivery, so this ability can be used in improving our education environment. With the implementation of Information Technology, costs of accessing educational material are cut down and it makes it easy for students to learn from anywhere. New technologies are changing the way we learn and they have also changed the process of teaching. Both teachers and students are using these new educational technologies to archive specific academic goals. The only challenge is that Information Technology comes at a cost, so those who cannot afford the price tend to have difficulties to benefit from the opportunities of Information Technology in education. For example; the increased use of internet broadband makes it easy for students to access academic information on time. Also teachers use this broadband internet to create and deliver academic data using videos and graphic illustrations. Information technology changes education in following ways:

•access to variety of learning resources

•immediacy to information

•anytime learning

•anywhere learning

•collaborative learning

•multimedia approach to education

•authentic and up to date information

•access to online libraries

•teaching of different subjects made interesting

•educational data storage

•distance education

•access to the source of information

•multiple communication channels-e-mail, chat, forum, blogs, etc.

•access to open courseware

•better accesses to children with disabilities

•reduces time on many routine tasks

\_

Benefits of education technology:

Using computers or other forms of technology can give students practice on core content and skills while the teacher can work with others, conduct assessments, or perform other tasks. Through the use of educational technology, education is able to be individualized for each student allowing for better differentiation and allowing students to work for mastery at their own pace. Modern educational technology can improve access to education, including full degree programs. It enables better integration for non-full-time students, particularly in continuing education, and improved interactions between students and instructors. Learning material can be used for long distance learning and are accessible to a wider audience. Course materials are easy to access. Students can access and engage with numerous online resources at home. Using online resources such as Khan Academy or TED Talks can help students spend more time on specific aspects of what they may be learning in school, but at home. Schools like MIT have made certain course materials free online. According to James Kulik, who studies the effectiveness of computers used for instruction, students usually learn more in less time when receiving computer-based instruction and they like classes more and develop more positive attitudes toward computers in computer-based classes. Employers’ acceptance of online education has risen over time. More than 50% of human resource managers SHRM surveyed for an August 2010 report said that if two candidates with the same level of experience were applying for a job, it would not have any kind of effect whether the candidate’s obtained degree was acquired through an online or a traditional school. The use of educational apps generally has positive effect on learning. Pre- and post- tests reveal that the use of apps on mobile devices reduces the achievement gap between struggling and average students. Kindergarten students that use iPads show much higher rates of literacy than non-users. Medical students at University of California Irvine that utilized iPad academically have been reported to score 23% higher on national exams than previous classes that did not. Mobile devices and apps have also been shown to assist in the education of disabled students, with one study reporting increased engagement and accelerated comprehension and learning.

\_

Education Technology helps students:

-they like it better than paper and pen

-provides multimedia to address all learning styles

-provides interactive, student centered activities

-provides extra support and help resources

\_

Education Technology helps teachers:

-organization and efficiency

-paperless

-finding lesson resources

-collaborate with other teachers

-connect with parents

\_

Disadvantages of educational technology:

According to Branford et al, “technology does not guarantee effective learning” and inappropriate use of technology can even hinder it. A University of Washington study of infant vocabulary shows that it is slipping due to educational baby DVDs. Adaptive instructional materials tailor questions to each student’s ability and calculate their scores, but this encourages students to work individually rather than socially or collaboratively. Social relationships are important but high-tech environments may compromise the balance of trust, care and respect between teacher and student. Massively Open Online Courses (MOOCs), although quite popular in discussions of technology and education in developed countries (more so in US), are not a major concern in most developing or low-income countries. One of the stated goals of MOOCs is to provide less fortunate populations (i.e., in developing countries) an opportunity to experience courses with US-style content and structure. However, research shows only 3% of the registrants are from low-income countries and although many courses have thousands of registered students only 5-10% of them complete the course. With the Internet and social media, using educational apps makes the students highly susceptible to distraction and sidetracking. Even though proper use has shown to increase student performances, being distracted would be detrimental. Students have always faced distractions; computers and cellphones are a particular challenge because the stream of data can interfere with focusing and learning. Too much information, coming too rapidly, can overwhelm thinking. Another disadvantage is increased potential for cheating. Smartphones can be very easy to hide and use inconspicuously, especially if their use is normalized in the classroom. These disadvantages can be managed with strict rules and regulations on mobile phone use. Neil Postman endorsed the notion that technology impacts human cultures, including the culture of classrooms, and that this is a consideration even more important than considering the efficiency of a new technology as a tool for teaching. Regarding the computer’s impact on education, Postman writes: What we need to consider about the computer has nothing to do with its efficiency as a teaching tool. We need to know in what ways it is altering our conception of learning, and how in conjunction with television, it undermines the old idea of school.

Danger of overstimulation:

Technology is rapidly and profoundly altering our brains. High exposure levels stimulate brain cell alteration and release neurotransmitters, which causes the strengthening of some neural pathways and weakening of others. This leads to heightened stress levels on the brain that at first boost energy levels, but over time actually augments memory, impair cognition, lead to depression, alter the neural circuitry of the hippocampus, amygdala and prefrontal cortex. These are the brain regions that control mood and thought. If unchecked, the underlying structure of the brain could be altered. Over-stimulation due to technology may begin too young. When children are exposed before the age of seven, important developmental tasks may be delayed, and bad learning habits might develop, which deprives children of the exploration and play that they need to develop.

\_\_\_\_\_\_\_\_

\_

The role of education as social agent is universally recognised. Social change always takes place when humans need change in society. Social change comes into action when existing social setup fails to understand and meet the needs of humans. Education always initiates to bring permanent changes in personality of human being. In the second half of 20th century the role of education was overstressed to fulfil the needs of nation. Education is still used to serve as an agent to nation. Social changes take place as a result of multiple changes that take place in the social and non-social environment. Education can bring social changes in outlook and attitude of humans. It can initiate a change in the pattern of social relationships. Education empowers the individual. But individual can’t bring change solely. Societal change always comes from the collective transformation of people of society. Education is an independent institution now and it can bring change in every aspect of men’s life. Francis J. Brown remarks that Education is a process which brings about changes in the behavior of society. It is a process which enables every individual to effectively participate in the activities of society and to make positive contribution to the progress of society. Most progressive people feel that the process of inquiry or problem-solving is the proper tool for managing change in society. Education should not be judged in terms of liability to provide employment to certain amount of people rather it should be judged on the basis of modern technology, and quality education provided to the poor and deprived people of society. Education, in this way, can turn the population into valuable and productive part of society.

\_

Education has been accepted as one major agency of socialization, and teachers and educational institutions as socializing agents. In describing education as an instrument of social change, three things are important: the agents of change, the content of change, and the social background of those who are sought to be changed, i.e. students. Educational institutions under the control of different cultural groups reflect the values of those groups which support and control education. In this situation, teachers impart specific values, aspirations and to the children. Social reformers, who were educated emphasized values like removal of caste restrictions, equality of women, doing away with social evil–social customs and practices, voice in the governance of the country, establishing democratic institutions and so on. They, thus, wanted to teach liberal philosophy through education for changing society. In other words they regarded education as a flame or light of knowledge which dispelled the darkness of ignorance. The use of education for spreading the values of modernization came to be emphasized from the 1960s and 1970s onwards. Highly productive economies, distributive justice, people’s participation in decision-making bodies, adoption of scientific technology in industry, agriculture and other occupations and professions were accepted as goals for modernizing the Indian society. And these goals were to be achieved through liberal education. Thus, modernization was not accepted as a philosophy or a movement based on rational values system but as a process that was to be confined only to economic field but was to be achieved in social, political, cultural and religious fields too. Education was sought to be utilized as channel for the spread of modernity According to the sociological perspective, education does not arise in response of the individual needs of the individual, but it arises out of the needs of the society of which the individual is a member. The educational system of any society is related to its total social system. It is a sub system performing certain functions for the on-going social system. The goals and needs of the total social system get reflected in the functions it lays down for educational system and the form in which it structures it to fulfil those functions. In a static society, the main function of the educational system is to transmit the cultural heritage to the new generations. But in a changing society, these keep on changing from generation to generation and the educational system in such a society must not only transmit the cultural heritage, but also aid in preparing the young for adjustment to any changes in them that may have occurred or are likely to occur in future. In contemporary societies, “The proportion of change that is either planned or issues from the secondary consequences of deliberate innovations is much higher than in former times.” This is more so in societies that has newly become independent and are in a developing stage. Consequently, in such modern complex societies, education is called upon to perform an additional function of becoming an agent of social change. Thus, the relationship between educational system and society is mutual; sometimes the society influences changes in educational system and at other times the educational system influences changes in the society. The role of education as an agent or instrument of social change and social development is widely recognized today. Social change may take place – when humans need change. When the existing social system or network of social institutions fails to meet the existing human needs and when new materials suggest better ways of meeting human needs. Education is seen as a major vector in society, but that it is largely allocated a conservative role, since its main function is in the socialization of the young and the maintenance of the social order. During times of rapid social change, such as the second half of the 20th century, the role of education in the service of the nation is emphasized. When things are going well, especially economically, more experimentation with education is supported, and more idealistic goals are pursued, such as equity of educational opportunity. It is in the ideological and moral spheres, however, that education is most clearly expected to play a leading role. Social change takes place as a response to many types of changes that take place in the social and nonsocial environment. Education can initiate social changes by bringing about a change in outlook and attitude of man. It can bring about a change in the pattern of social relationships and thereby it may cause social changes.

\_

Role of education in Social Change

1) Education perpetuates eternal values

2) Promotes capacity to welcome social change

3) Evaluation of social change

4) Transmission of culture

5) Removal of obstacles

6) Increasing the areas of knowledge

7) Leadership role

8) Mother of new changes

9) Spreading knowledge

10) Stabilizing democratic values

11) Control channelizes and modifies thoughts of new generation

12) School as a workshop for citizenship training

13) Awareness against social evils

14) National and international understanding

15) Equality among masses

16) Social Awakening

17) National Development

\_

Influence of Education on Family:

1. Improve home management

2. Recognition of worth of home

3. Production of educated elite

4. To discharge productive duties towards home

5. Family Planning

6. An efficient member of family

7. Social efficiency of family

8. Adjustability in family

9. Co-ordination of family and school

10. Education of parents

11. To maintain better homes

12. Cultivation of higher values

13. Propagates cooperation within and outside the home

14. Create liberal and wider attitude

15. Increasing productivity of family members

16. Optimizing Economic efficiency

Search

Dr Rajiv Desai

An Educational Blog

Dr Rajiv Desai / EDUCATION / EDUCATION

EDUCATION

February 28, 2016 by Dr Rajiv Desai

EDUCATION:

\_\_\_\_\_

\_\_\_\_\_

Prologue:

Human life is the best creation of evolution and it has got two aspects: the biological and the socio-cultural. Biological aspect is found in plant and animal life. But the socio-cultural aspect is the rare distinction of human life alone. Our life in the complex world is governed not only by the biological process, but also by a social process. While the functioning of the organism is the biological heredity, education is his social heredity. With biological heredity alone, he would be nothing better than an animal. But he has social heredity that makes him a man who is now capable of governing this world. Education is vital process of social life. Without education human race would be no better than animal race. Eating, drinking, sleeping and sexual life are common to both animals and men. It is only knowledge and education, where they differ. The one thing that separates man from animals is the ability to advance knowledge and expertise from one generation to the next. It is widely accepted that the process of education begins at birth and continues throughout life. Some believe that education begins even earlier than this, as evidenced by some parents’ playing music or reading to the baby in the womb in the hope it will influence the child’s development. The word ‘education’ is often used to refer solely to formal education but education not only comes from books and school teachers, but also from knowledge and experience by socialization. Family members and society have a strong influence on the informal education of the individual. Education is one of those crucial topics raised by people – whether politicians, bureaucrats, academics or industrialists – as having the potential to transform people, nation and the world. Experts estimate that an Indian Class VIII student is at the same level as a South Korean Class III student in math abilities or a Class II student from Shanghai when it comes to reading skills. One look at India’s education system leaves you more with remorse than hope. The figures revealed in the 2015 Annual Status of Education Report (ASER) state that in 2014, only 50% of class V students could read simple English sentences. Students in class III do not know numbers 1-100, while only 50% of class V students can only do simple arithmetic like subtraction and division, something which most students ought to learn by class II. In Mali, Peru and Pakistan, reading tests show that 70 percent of primary school children can’t read at grade level, with many unable to read at all. What causes disparity in education levels of different countries? Is education system and policy at fault? Does poverty and overpopulation reduce educational attainment? Is it collective conscience of nation that disrespects education? Although I have discussed about education in my website and Facebook pages in various articles, today I devote entire article to education looking at the enormity of the subject.

\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_

Quotable quotes on ‘Education’:

\_

The difference between school and life? In school, you’re taught a lesson and then given a test. In life, you’re given a test that teaches you a lesson.

Tom Bodett

\_

Education breeds confidence. Confidence breeds hope. Hope breeds peace.

Confucius, Chinese philosopher (551-479 BC)

\_

Education today, more than ever before, must see clearly the dual objectives: Education for living and educating for making a living.

James Mason Wood

\_

True education makes for inequality; the inequality of individuality, the inequality of success, the glorious inequality of talent, of genius.

Felix E. Schelling

\_

The aim of education should be to teach us rather how to think, than what to think.

James Beattie

\_

In its broad sense, education refers to any act or experience that has a formative effect on the mind, character, or physical ability of an individual…In its technical sense education is the process by which society, through schools, colleges, universities, and other institutions, deliberately transmits its cultural heritage–its accumulated knowledge, values, and skills–from one generation to another.

George Kneller

\_

One of the greatest problems of our time is that many are schooled but few are educated.

Thomas Moore

\_\_\_\_\_\_\_

\_\_\_\_\_\_\_

Why education needs your attention especially in developing nations:

1. Primary schools still lack basic materials and qualified teachers.

2. 58 million children still don’t have access to education. While it’s true that more kids are in school than ever before, this number is far too high. The UNESCO report, Children Still Battling to go to School, finds that 95% of the 28.5 million children not getting a primary school education live in low and lower-middle income countries – 44% in sub-Saharan Africa, 19% in south and west Asia and 14% in the Arab states. Girls make up 55% of the total and were often the victims of rape and other sexual violence that accompanies armed conflicts.

3. For those in school, the quality of their education is questionable. We often use attendance as an indication of progress, but unfortunately that’s not the whole story. In places like Malawi, for instance, a rapid increase in enrolment has led to a lacking of classrooms, textbooks, and trained teachers. Case in point: 250 million children are still not able to read or write by the time they reach Grade 4.

4. Many schools lack clean water and clean safe toilets. For girls, this is especially troubling. According to UNESCO, 1 in 10 girls miss school when they have their period because facilities don’t exist to cater to them, eventually causing them to drop out as a result.

5. Secondary education is not yet an objective, but it needs to be. In 2000 secondary education for all might have been unrealistic, but that’s no longer the case.

6. We need to focus our efforts on girls. Educating girls improves a country’s social and economic well-being. In fact, evidence shows that countries with less gender disparity have higher economic growth. Countries that succeed in educating girls at the same level as boys can gain more than $1 billion a year. Right now 31 million girls don’t have the opportunity to be in school for a variety of reasons. In Africa, for instance, 1 in 10 girls misses classes or drops out entirely due to their period. We need to address these barriers. Girls that receive just one year more of education see major payoffs. They’ll see an increase of up to 25% in future earnings and their children will be twice as likely to survive past the age of 5. For families living in poverty, these numbers have huge implications. Girls who are educated have more control over their bodies. They are 3 times less likely to contract HIV, and less likely to have unwanted pregnancies.

7. Children who aren’t in school all too often end up performing dangerous jobs to support their families or are forced into slavery or early marriages. According to the World Bank, one third of girls in developing countries marry before the age of 18. School could change that.

8. Children and teens that are educated are less vulnerable to being manipulated by extremist ideology. Not only do they have the ability to think for themselves, but youth who attend school have less time to get into trouble.

9. Education donations are easy to track and we know where the money goes. Donations fund infrastructure, teacher salaries, school materials and equipment, running water and sanitation. The Global Partnership for Education is also diligent about requiring donor countries to set quantitative goals and milestones to ensure that money is spent wisely and responsibly.

\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_

History of education:

To understand schools, we must view them in historical perspective. If we want to understand why standard schools are what they are, we have to abandon the idea that they are products of logical necessity or scientific insight. They are, instead, products of history. Schooling, as it exists today, only makes sense if we view it from a historical perspective.

\_

Prehistoric and primitive cultures:

The term education can be applied to primitive cultures only in the sense of enculturation, which is the process of cultural transmission. A primitive person, whose culture is the totality of his universe, has a relatively fixed sense of cultural continuity and timelessness. The model of life is relatively static and absolute, and it is transmitted from one generation to another with little deviation. As for prehistoric education, it can only be inferred from educational practices in surviving primitive cultures. The purpose of primitive education is thus to guide children to becoming good members of their tribe or band. There is a marked emphasis upon training for citizenship, because primitive people are highly concerned with the growth of individuals as tribal members and the thorough comprehension of their way of life during passage from prepuberty to postpuberty. Because of the variety in the countless thousands of primitive cultures, it is difficult to describe any standard and uniform characteristics of prepuberty education. Nevertheless, certain things are practiced commonly within cultures. Children actually participate in the social processes of adult activities, and their participatory learning is based upon what the American anthropologist Margaret Mead called empathy, identification, and imitation. Primitive children, before reaching puberty, learn by doing and observing basic technical practices. Their teachers are not strangers but rather their immediate community. In contrast to the spontaneous and rather unregulated imitations in prepuberty education, postpuberty education in some cultures is strictly standardized and regulated. The teaching personnel may consist of fully initiated men, often unknown to the initiate though they are his relatives in other clans. The initiation may begin with the initiate being abruptly separated from his familial group and sent to a secluded camp where he joins other initiates. The purpose of this separation is to deflect the initiate’s deep attachment away from his family and to establish his emotional and social anchorage in the wider web of his culture. The initiation “curriculum” does not usually include practical subjects. Instead, it consists of a whole set of cultural values, tribal religion, myths, philosophy, history, rituals, and other knowledge. Primitive people in some cultures regard the body of knowledge constituting the initiation curriculum as most essential to their tribal membership. Within this essential curriculum, religious instruction takes the most prominent place

\_

Hunter-gatherer to agriculture to industrialisation:

For hundreds of thousands of years, before the advent of agriculture, we lived as hunter-gatherers. The strong drives in children to play and explore presumably came about, during our evolution as hunter-gatherers, to serve the needs of education. Adults in hunter-gatherer cultures allowed children almost unlimited freedom to play and explore on their own because they recognized that those activities are children’s natural ways of learning. With the rise of agriculture, and later of industry, children became forced laborers. Play and exploration were suppressed. Wilfulness, which had been a virtue, became a vice that had to be beaten out of children. The invention of agriculture, beginning 10,000 years ago in some parts of the world and later in other parts, set in motion a whirlwind of change in people’s ways of living. The hunter-gatherer way of life had been skill-intensive and knowledge-intensive, but not labor-intensive. To be effective hunters and gatherers, people had to acquire a vast knowledge of the plants and animals on which they depended and of the landscapes within which they foraged. They also had to develop great skill in crafting and using the tools of hunting and gathering. They had to be able to take initiative and be creative in finding foods and tracking game. However, they did not have to work long hours; and the work they did was exciting, not dreary. Anthropologists have reported that the hunter-gatherer groups they studied did not distinguish between work and play–essentially all of life was understood as play. Agriculture gradually changed all that. With agriculture, people could produce more food, which allowed them to have more children. Agriculture also allowed people (or forced people) to live in permanent dwellings, where their crops were planted, rather than live a nomadic life, and this in turn allowed people to accumulate property. But these changes occurred at a great cost in labor. While hunter-gatherers skilfully harvested what nature had grown, farmers had to plow, plant, cultivate, tend their flocks, and so on. Successful farming required long hours of relatively unskilled, repetitive labor, much of which could be done by children. With larger families, children had to work in the fields to help feed their younger siblings, or they had to work at home to help care for those siblings. Children’s lives changed gradually from the free pursuit of their own interests to increasingly more time spent at work that was required to serve the rest of the family. Agriculture and the associated ownership of land and accumulation of property also created, for the first time in history, clear status differences. People who did not own land became dependent on those who did. Also, landowners discovered that they could increase their own wealth by getting other people to work for them. Systems of slavery and other forms of servitude developed. Those with wealth could become even wealthier with the help of others who depended on them for survival. All this culminated with feudalism in the Middle Ages, when society became steeply hierarchical, with a few kings and lords at the top and masses of slaves and serfs at the bottom. Now the lot of most people, children included, was servitude. The principal lessons that children had to learn were obedience, suppression of their own will, and the show of reverence toward lords and masters. A rebellious spirit could well result in death. In the Middle Ages, lords and masters had no qualms about physically beating children into submission. With the rise of industry and of a new bourgeoisie class, feudalism gradually subsided, but this did not immediately improve the lives of most children. Business owners, like landowners, needed laborers and could profit by extracting as much work from them as possible with as little compensation as possible. Everyone knows of the exploitation that followed and still exists in many parts of the world. People, including young children, worked most of their waking hours, seven days a week, in beastly conditions, just to survive. The labor of children was moved from fields, where there had at least been sunshine, fresh air, and some opportunities to play, into dark, crowded, dirty factories. In England, overseers of the poor commonly farmed out paupers’ children to factories, where they were treated as slaves. Many thousands of them died each year of diseases, starvation, and exhaustion. Not until the 19th century did England pass laws limiting child labor. In sum, for several thousand years after the advent of agriculture, the education of children was, to a considerable degree, a matter squashing their wilfulness in order to make them good laborers. A good child was an obedient child, who suppressed his or her urge to play and explore and dutifully carried out the orders of adult masters. Such education, fortunately, was never fully successful. The human instincts to play and explore are so powerful that they can never be fully beaten out of a child. But certainly the philosophy of education throughout that period, to the degree that it could be articulated, was the opposite of the philosophy that hunter-gatherers had held for hundreds of thousands of years earlier.

\_

For various reasons, some religious and some secular, the idea of universal, compulsory education arose and gradually spread. Education was understood as inculcation. As industry progressed and became somewhat more automated, the need for child labor declined in some parts of the world. The idea began to spread that childhood should be a time for learning, and schools for children were developed as places of learning. The idea and practice of universal, compulsory public education developed gradually in Europe, from the early 16th century on into the 19th. It was an idea that had many supporters, who all had their own agendas concerning the lessons that children should learn. Much of the impetus for universal education came from the emerging Protestant religions. Martin Luther declared that salvation depends on each person’s own reading of the Scriptures. A corollary, not lost on Luther, was that each person must learn to read and must also learn that the Scriptures represent absolute truths and that salvation depends on understanding those truths. Luther and other leaders of the Reformation promoted public education as Christian duty, to save souls from eternal damnation. By the end of the 17th century, Germany, which was the leader in the development of schooling, had laws in most of its states requiring that children attend school; but the Lutheran church, not the state, ran the schools. In America, in the mid-17th century, Massachusetts became the first colony to mandate schooling, the clearly stated purpose of which was to turn children into good Puritans. Beginning in 1690, children in Massachusetts and adjacent colonies learned to read from the New England Primer, known colloquially as “The Little Bible of New England”. It included a set of short rhymes to help children learn the alphabet, beginning with, “In Adam’s Fall, We sinned all,” and ending with, “Zaccheus he, Did climb the tree, His Lord to see.” The Primer also included the Lord’s Prayer, the Creed, the Ten Commandments, and various lessons designed to instil in children a fear of God and a sense of duty to their elders. Employers in industry saw schooling as a way to create better workers. To them, the most crucial lessons were punctuality, following directions, tolerance for long hours of tedious work, and a minimal ability to read and write. From their point of view, the duller the subjects taught in schools the better. As nations gelled and became more centralized, national leaders saw schooling as means of creating good patriots and future soldiers. To them, the crucial lessons were about the glories of the fatherland, the wondrous achievements and moral virtues of the nation’s founders and leaders, and the necessity to defend the nation from evil forces elsewhere. Into this mix we must add reformers who truly cared about children, whose messages may ring sympathetically in our ears today. These are people who saw schools as places for protecting children from the damaging forces of the outside world and for providing children with the moral and intellectual grounding needed to develop into upstanding, competent adults. But they too had their agenda for what children should learn. Children should learn moral lessons and disciplines, such as Latin and mathematics, that would exercise their minds and turn them into scholars. So, everyone involved in the founding and support of schools had a clear view about what lessons children should learn in school. Quite correctly, nobody believed that children left to their own devices, even in a rich setting for learning, would all learn just exactly the lessons that they (the adults) deemed to be so important. All of them saw schooling as inculcation, the implanting of certain truths and ways of thinking into children’s minds. The only known method of inculcation, then as well as now, is forced repetition and testing for memory of what was repeated.

\_

With the rise of schooling, people began to think of learning as children’s work. The same power-assertive methods that had been used to make children work in fields and factories were quite naturally transferred to the classroom. Repetition and memorization of lessons is tedious work for children, whose instincts urge them constantly to play freely and explore the world on their own. Just as children did not adapt readily to laboring in fields and factories, they did not adapt readily to schooling. This was no surprise to the adults involved. By this point in history, the idea that children’s own wilfulness had any value was pretty well forgotten. Everyone assumed that to make children learn in school the children’s wilfulness would have to be beaten out of them. Punishments of all sorts were understood as intrinsic to the educational process. In some schools children were permitted certain periods of play (recess), to allow them to let off steam; but play was not considered to be a vehicle of learning. In the classroom, play was the enemy of learning.

\_

In recent times, the methods of schooling have become less harsh, but basic assumptions have not changed. Learning continues to be defined as children’s work, and power assertive means are used to make children do that work. In the 19th and 20th centuries, public schooling gradually evolved toward what we all recognize today as conventional schooling. The methods of discipline became more humane, or at least less corporal; the lessons became more secular; the curriculum expanded, as knowledge expanded, to include an ever-growing list of subjects; and the number of hours, days, and years of compulsory schooling increased continuously. School gradually replaced fieldwork, factory work, and domestic chores as the child’s primary job. Just as adults put in their 8-hour day at their place of employment, children today put in their 6-hour day at school, plus another hour or more of homework, and often more hours of lessons outside of school. Over time, children’s lives have become increasingly defined and structured by the school curriculum. Children now are almost universally identified by their grade in school, much as adults are identified by their job or career. Schools today are much less harsh than they were, but certain premises about the nature of learning remain unchanged: Learning is hard work; it is something that children must be forced to do, not something that will happen naturally through children’s self-chosen activities. The specific lessons that children must learn are determined by professional educators, not by children, so education today is still, as much as ever, a matter of inculcation (though educators tend to avoid that term and use, falsely, terms like “discovery”). Clever educators today might use “play” as a tool to get children to enjoy some of their lessons, and children might be allowed some free playtime at recess (though even this is decreasing in very recent times), but children’s own play is certainly understood as inadequate as a foundation for education. Children whose drive to play is so strong that they can’t sit still for lessons are no longer beaten; instead, they are medicated. School today is the place where all children learn the distinction that hunter-gatherers never knew–the distinction between work and play. The teacher says, “you must do your work and then you can play.” Clearly, according to this message, work, which encompasses all of school learning, is something that one does not want to do but must; and play, which is everything that one wants to do, has relatively little value. That, perhaps, is the leading lesson of our method of schooling. If children learn nothing else in school, they learn the difference between work and play and that learning is work, not play.

\_

The history of philosophy of education includes many figures including Socrates, Plato, Aristotle, Rousseau, and Dewey. Other major philosophers including Thomas Aquinas, Augustine, Thomas Hobbes, René Descartes, John Locke, David Hume, Immanuel Kant, John Stuart Mill, Karl Marx, Bertrand Russell, and, more recently, R.S. Peters in Britain and Israel Scheffler in the United States, have also made substantial contributions to educational thought. It is worth noting again that virtually all these figures, despite their many philosophical differences and with various qualifications and differences of emphasis, take the fundamental aim of education to be the fostering of rationality (see reason). No other proposed aim of education has enjoyed the positive endorsement of so many historically important philosophers although this aim has come under increasing scrutiny in recent decades.

\_

The systematic provision of learning techniques to most children, such as literacy, has been a development of the last 150 or 200 years, or even last 50 years in some countries. Schools for the young have historically been supplemented with advanced training for priests, bureaucrats and specialists. In most countries today, full-time education, whether at school or otherwise, is compulsory for all children up to a certain age. Due to this the proliferation of compulsory education, combined with population growth, UNESCO has calculated that in the next 30 years more people will receive formal education than in all of human history thus far.

\_\_\_\_\_\_\_

\_\_\_\_\_\_\_

Introduction to education:

\_

Education encompasses all aspects of life. It is such a vast and all-inclusive field that it becomes practically impossible to encapsulate its definition in a few paragraphs, let alone in a few bullet points. Thinkers, eminent educationists, other scholars and political leaders have given their opinion but none is comprehensive enough to include every aspect of education.

• Confucious saw learning as a process of observation of the subject matter, be it books, objects or people, followed by reflection that somehow changed a person.

• Aristotle considered Nature, Habit and Reason to be three equally important forces to be cultivated in education.

• Rabindra Nath Tagore propagated education that affects unity in all the things present in the context of one’s life. His educational philosophy revolved around naturalism, humanism, inter-nationalism and idealism.

• John Dewey believed that students should be involved in real-life tasks and challenges. His emphasis on experiential learning helped promote the progressive education movement.

• According to Bertrand Russell, the principal purpose of education should be to promote the development of vitality, courage, sensitivity and intelligence. He believed in students experiencing a sense of intellectual adventure in an atmosphere of open enquiry.

• Samuel Horsley stated that wonder connected with principle of rational curiosity is the source of all knowledge and discovery.

\_

Education definition:

Education is the process of acquiring knowledge, skills, attitudes, interest, abilities, competence and the cultural norms of a society by people and to transmit it to the coming generations so as to enhance perpetual development of the society. There are various definitions of education. Webster dictionary defines education as the process of educating or teaching. It further explained that, to educate means, to develop knowledge, skill, or character of the person. Thus, education was defined as the means to develop the knowledge, skill, or character of a student. It is also described as the formal process by society to deliberately transmit its accumulated knowledge, skills, habits, customs and values from one generation to the next. Societies through ages have one form of education or the other, whether indigenous or Western education. This is because education is as essential to man as life itself on this planet earth. Education may be defined as the process by which behavioral changes take place in an individual as a result of experiences, which he has undergone. In other words, “education is the process of bringing out desirable change into the behavior of human beings.” If education to be effective it should result in changes in the entire behavioral component. The behavior changes must be directed towards a desirable end. They should be acceptable socially, culturally, economically and result in a change in knowledge, skill, attitude and understanding. Thus in education, the greatest emphasis should be placed on the behavioral component of an individual. It can also be defined as the process of imparting or acquiring knowledge and habits through instructor or study. When learning is progressing towards goals that have been established in accordance with a philosophy which has been defined for and is understood by learner, it is called “education”.

\_

Education can be defined as:

1. The act or process of educating or being educated.

2. The knowledge or skill obtained or developed by a learning process.

3. A program of instruction of a specified kind or level: e.g. driver education; college education.

4. The field of study that is concerned with the pedagogy of teaching and learning.

5. An instructive or enlightening experience.

\_

Education can also be defined as:

1. The act or process of imparting or acquiring general knowledge and of developing the powers of reasoning and judgment.

2. The act or process of imparting or acquiring particular knowledge or skills, as for a profession.

3. A degree, level, or kind of schooling: a college education.

4. The result produced by instruction, training, or study.

5. The science or art of teaching; pedagogics.

\_

Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs, and habits. Educational methods include storytelling, discussion, teaching, training, and directed research. Education frequently takes place under the guidance of educators, but learners may also educate themselves. Education can take place in formal or informal settings and any experience that has a formative effect on the way one thinks, feels, or acts may be considered educational. The methodology of teaching is called pedagogy. Formal education is commonly and formally divided into stages such as preschool or kindergarten, primary school, secondary school and then college, university or apprenticeship. A right to education has been recognized by some governments, including at the global level: Article 13 of the United Nations’ 1966 International Covenant on Economic, Social and Cultural Rights recognizes a universal right to education. In most regions education is compulsory up to a certain age.

\_\_

Generally, at the start of a very young age, children learn to develop and use their mental, moral and physical powers, which they acquire through various types of education. Education is commonly referred to as the process of learning and obtaining knowledge at school, in a form of formal education. However, the process of education does not only start when a child first attends school. Education begins at home. One does not only acquire knowledge from a teacher; one can learn and receive knowledge from a parent, family member and even an acquaintance. In almost all societies, attending school and receiving an education is extremely vital and necessary if one wants to achieve success. However, unfortunately we have places in the world, where not everyone has an opportunity to receive this formal type of education. The opportunities that are offered are greatly limited. Sometimes there are not enough resources to provide schooling. Furthermore because parents need their children to help them work in factories, have odd jobs, or just do farm work.

\_

A good education is the key to a better life and a stronger economy. A person’s earnings increase by 10 percent with each year of school they complete. Women with higher levels of education have healthier children. And increasing the average level of higher education in a country by just one year can add half a percentage point of growth to GDP. Over the last decade, the world has witnessed incredible increases in school enrolment. But tragically, studies show there is still a learning crisis—children attending school still leave without the ability to read, write and do basic math. In Mali, Peru and Pakistan, reading tests show that 70 percent of primary school children can’t read at grade level, with many unable to read at all — and these aren’t the only countries with such problems. With youth bulges in countries throughout the developing world, a growing number of young people find they lack the knowledge they need to get a job and earn a living. Globally, girls are especially disadvantaged by poor quality education and low access levels. Right now, 62 million girls are not in school world-wide, and millions more are fighting to stay there. Yet we know that when girls are educated, their families are healthier, they have fewer children, they get married later, and they have more opportunities to generate income.

\_

Education is an essential tool for everyone to get success in life and earn respect and recognition. Education plays great role in everyone’s life as it brings positive effects on the human life. It provides ability to think in both aspects positive and negative to get surety about and handle the situation. It is the easiest way to enhance our knowledge and expand skills to have clear view over the world. It creates interest within us to enhance our way of life and thus country growth and development. We can learn by watching TV, reading books, discussion and by other various means. Proper education identifies our career goals and teaches us to live in more civilized manner. We cannot imagine our life without education as without it we cannot develop a healthy surrounding and generate an advance community. Everything in life is based on the knowledge and skill of the people which ultimately comes from education. The bright future of the individual, society, community and country depends on the education system getting followed. Increasing the demand of more technological advancement in life enhances the scope of quality education. It assists scientists in research works, invention of equipment, devices, machines and other technologies required for the modern life. People are getting highly aware about the scope and importance of education in their life and thus trying to get benefited. However, people living in underdeveloped countries are still not able to get proper education because of the lack of some basic requirement of the life. They are still fighting with their daily routines need. We need to bring education awareness equally in every area for better growth and development throughout the country.

\_

Etymology of education:

Etymologically, the word “education” is traced to different sources of derivation. According to the one view the word education is derived from Latin word “educo” means ‘I lead out’ here E means ‘out of’ while ‘duco’ means ‘I lead’ in other words it means ‘I lead out of darkness into light’ and here ‘I’ denotes the teacher. There is another view that the word ‘education’ is derived from the word ‘educare’, meaning ‘to rear’ ‘to bring up’ ‘to nourish’. This meaning implies that the child is lacking and he is to be brought up with certain preconceived ideas. for which, he is to be fed with knowledge in proper way so that, child or student can utilize his innate power to achieve his ends in other words, it means that the child is to be brought up according to certain aims and ends in view. There is also another view that education is originated from the word ‘educere’ meaning ‘to lead out’. This implies ‘growth from within’. The child already possesses some innate powers and capacities. Education is the process of developing these powers, nothing from without is to be imposed on child. There is yet another view, that in the term “Education” comes from the word ‘Educatum’ which means the act of “teaching or training”. According to the above stated Latin words, Educare and Educatum, education is something external, which is imposed from outside. But according to the word ‘Educere’ it is growth from within. The modern educationalists are of the opinion that the word “Educere” is more acceptable as it allows more freedom to a child. Accordingly, the child is not to accept imposition, but has to observe, think and draw conclusions for himself. Therefore, education means ‘to lead out’, ‘to lead forth’, or ‘to unfold the hidden talents of man’. It is very much the art of developing and cultivation the various powers of mind, physical, mental and moral. However, it should be noted clearly that nothing can be drawn, unless something is put before hand, means the growth of the child will not take automatically, it needs certain knowledge and experience, so we have to give him knowledge and experience before we expect to draw out the best in the child. Hence, education can be looked upon a process of providing desirable knowledge and experience to the child so as to develop his inner powers to the maximum possible extent. In other words, ‘education’ means both the acquisition of knowledge and experience as well as the development of skills, habits, and an attitude which helps a person to lead a full and worthwhile life in this universe. It is in fact, a process of training the individual through various experiences of life, so as to draw out the best in him.

\_

Meaning of education:

Education is the process of giving training and instruction to people to develop their knowledge, abilities, skills, character and mental powers. The modern definition of education is the production of desirable changes in human behavior- in knowledge (things known), attitudes (things felt) and skills (things done), in all of them or in one or more of them. Education is not just about academics but creating well-rounded individuals that are prepared for the challenges and obstacles that life might throw them in the future. It is an area too often neglected, whether the emphasis is on learning content only or stiff competition for getting into top colleges; something is often lost. Education in the largest sense is any act or experience that has a formative effect on the mind, character or physical ability of an individual. In its technical sense, education is the process by which society deliberately transmits its accumulated knowledge, skills and values from one generation to another. In ancient Greece, Socrates argued that education was about drawing out what was already within the student. At the same time, the Sophists, a group of itinerant teachers, promised to give students the necessary knowledge and skills to gain positions with the city-state. Thus we see that there are different views and understandings of the meaning of the term education. In the modern times it has acquired two different shades of meaning namely:

(1) an institutional instruction, given to students in school colleges formally ;and

(2) a pedagogical science, studied by the student of education.

Education reflects the multifaceted nature of human life. Therefore, education is closely related to various aspects of human life and environment. Hence, the term education has a wide connotation. It is difficult to define education by single definition. Philosophers and thinkers from Socrates to Dewey in west and a host of Indian philosophers have attempted to define education. However education can be understood as the deliberate and systematic influence exerted by a mature through instruction, and discipline. It means the harmonious development of all the powers of the human being; physical social, intellectual, aesthetic and spiritual. The essential elements in the educative process are a creative mind, a well-integrated self, socially useful purposes and experience related to the interests of the individual, needs and abilities of the individual as a of a social group.

\_\_

Redden’s concept of education:

“Education is the deliberate and systematic influence exerted by the mature person upon the immature through instruction, discipline and harmonious development of physical, intellectual, aesthetic, social and spiritual powers of human being according to individual and social need directed towards the union of the educand and his Creator as the final end.”

1. Mature person should influence the immature, means that the child, who is immature, should be influenced by parents, the elders in the society and the teachers who are more experienced.

2. Harmonious development means that all elements of the man’s nature, viz., the physical, the intellectual, the aesthetic, the moral, the social and the spiritual must be developed in a balanced manner.

3. Power means all the capacities and interests in the child, viz. the cognitive, the reflective, the affective and the co-native.

4. Towards the union of the educand with his creator on the final end, means the ultimate aim in the union of the individual self with absolute. Here it synchronizes with the Indian idealistic aim of education, i.e. ultimate aim of education is the same as the ultimate aim of life. Accordingly, ultimate goal of life is the merger of the individual self with the universal self.

\_

Redden’s definition is considered to be most precise and most widely accepted. According to this definition, the human child is quite immature and undeveloped at birth, is subjected to systematic course of instructional and disciplinary influence by a mature and experienced person called ‘educator’. The child after undergoing this course of planned training becomes fit for satisfying the need of society as also of his own life. Deliberate and systematic influence means the exercise of the systematic control over the actions of the educand. It involves utmost care and guidance. Such planned influence takes the form of:

•Inculcating good habits

•Training senses and memory

•Proper development of imagination and powers of mind and

•Strengthening of the will

\_\_

Emile Durkheim defines education as “the influence exercised by the adult generation upon those who are not yet ready for adult life”. He further maintains that “society can survive only if there exists among its members a sufficient degree of homogeneity. The homogeneity is perpetuated and reinforced by education. A child through education learns basic rules, regulations, norms and values of society. Education thus is an essential prerequisite of modernization. It enables people to know the world beyond their own surroundings and transforms them to become rationalist and humanist in outlook and world view. However, it has to be kept in mind that the education has got modernized and in turn is contributing to the process of modernization of the society. The traditional education system was quite different from the contemporary one. In traditional society, the number of educational institutions was too small and the content of education was esoteric and essentially related with religion, philosophy, metaphysics and scriptural subjects. Modern education is exoteric, open and liberal. The world-view is scientific-rational; the theme consists of freedom, equality, humanism and denial of faith in dogma and supersti­tions. The course contents are rationalistic and in tune with the needs of the present-day society. Science and technology, grammar and literature, social philosophy, history and culture, geography and ecology, agriculture and horticulture comprise the vast range of subjects which are taught in schools, colleges and universities. The modern education lays emphasis on the subjects like freedom, nationality, law, human rights, democracy and scientific world view. The other parts of education are the co-curricular and extra-curricular activities, which are often organized for total personality development of a student. The modern education is change-oriented and, therefore, courses are modified time and again corresponding to the changes taking place in society at large so as to keep pace with the needs of the changing situations in the wake of fast-changing industrial society. The present industrial society has opened up a multiplicity of occupations and professions and each one of them is associated with scientific knowledge and skills. It is a society of complex division of labour and requires people with specialized knowledge. The modern education fulfils needs of the industrial economy. A vast range of subjects like medicine, health, engineering, management and law have become hot areas of professionalization and specialization today.

\_

Education can be thought of as the transmission of the values and accumulated knowledge of a society. In this sense, it is equivalent to what social scientists term socialization or enculturation. Children—whether conceived among New Guinea tribes people, the Renaissance Florentines, or the middle classes of Manhattan—are born without culture. Education is designed to guide them in learning a culture, moulding their behaviour in the ways of adulthood, and directing them toward their eventual role in society. In the most primitive cultures, there is often little formal learning—little of what one would ordinarily call school or classes or teachers. Instead, the entire environment and all activities are frequently viewed as school and classes, and many or all adults act as teachers. As societies grow more complex, however, the quantity of knowledge to be passed on from one generation to the next becomes more than any one person can know, and, hence, there must evolve more selective and efficient means of cultural transmission. The outcome is formal education—the school and the specialist called the teacher. As society becomes ever more complex and schools become ever more institutionalized, educational experience becomes less directly related to daily life, less a matter of showing and learning in the context of the workaday world, and more abstracted from practice, more a matter of distilling, telling, and learning things out of context. This concentration of learning in a formal atmosphere allows children to learn far more of their culture than they are able to do by merely observing and imitating. As society gradually attaches more and more importance to education, it also tries to formulate the overall objectives, content, organization, and strategies of education. Literature becomes laden with advice on the rearing of the younger generation. In short, there develop philosophies and theories of education.

\_

Education values:

•Education is a fundamental building block in transforming people’s lives

•Every young person deserves access to an education, regardless of the situation they find themselves in

•Individuals need individual learning plans

•Education must balance academic and behavioural needs

•Education must result in improved life changes, including employability skills and opportunities.

\_\_\_\_\_\_\_

Philosophy of education:

All human societies, past and present, have had a vested interest in education; and some wits have claimed that teaching (at its best an educational activity) is the second oldest profession. While not all societies channel sufficient resources into support for educational activities and institutions, all at the very least acknowledge their centrality—and for good reasons. For one thing, it is obvious that children are born illiterate and innumerate, and ignorant of the norms and cultural achievements of the community or society into which they have been thrust; but with the help of professional teachers and the dedicated amateurs in their families and immediate environs (and with the aid, too, of educational resources made available through the media and nowadays the internet), within a few years they can read, write, calculate, and act (at least often) in culturally-appropriate ways. Some learn these skills with more facility than others, and so education also serves as a social-sorting mechanism and undoubtedly has enormous impact on the economic fate of the individual. Put more abstractly, at its best education equips individuals with the skills and substantive knowledge that allows them to define and to pursue their own goals, and also allows them to participate in the life of their community as full-fledged, autonomous citizens. But this is to cast matters in very individualistic terms, and it is fruitful also to take a societal perspective, where the picture changes somewhat. It emerges that in pluralistic societies such as the Western democracies there are some groups that do not wholeheartedly support the development of autonomous individuals, for such folk can weaken a group from within by thinking for themselves and challenging communal norms and beliefs; from the point of view of groups whose survival is thus threatened, formal, state-provided education is not necessarily a good thing. But in other ways even these groups depend for their continuing survival on educational processes, as do the larger societies and nation-states of which they are part; for as John Dewey put it in the opening chapter of his classic work Democracy and Education (1916), in its broadest sense education is the means of the ―social continuity of life. Dewey pointed out that the ―primary ineluctable facts of the birth and death of each one of the constituent members in a social group‖ make education a necessity, for despite this biological inevitability ―the life of the group goes on. The great social importance of education is underscored, too, by the fact that when a society is shaken by a crisis, this often is taken as a sign of educational breakdown; education, and educators, become scapegoats. It is not surprising that such an important social domain has attracted the attention of philosophers for thousands of years, especially as there are complex issues aplenty that have great philosophical interest. The following are some issues that philosophers have deeply thought about and philosophy is still in the process of answering these questions. Is Education as transmission of knowledge versus education as the fostering of inquiry and reasoning skills that are conducive to the development of autonomy (which, roughly, is the tension between education as conservative and education as progressive, and also is closely related to differing views about human ―perfectibility—issues that historically have been raised in the debate over the aims of education); the question of what this knowledge, and what these skills, ought to be—part of the domain of philosophy of the curriculum; the questions of how learning is possible, and what is it to have learned something—two sets of issues that relate to the question of the capacities and potentialities that are present at birth, and also to the process (and stages) of human development and to what degree this process is flexible and hence can be influenced or manipulated; the tension between liberal education and vocational education, and the overlapping issue of which should be given priority—education for personal development or education for citizenship (and the issue of whether or not this is a false dichotomy); the differences (if any) between education and enculturation; the distinction between educating versus teaching versus training versus indoctrination; the relation between education and maintenance of the class structure of society, and the issue of whether different classes or cultural groups can—justly—be given educational programs that differ in content or in aims; the issue of whether the rights of children, parents, and socio-cultural or ethnic groups, conflict—and if they do, the question of whose rights should be dominant; the question as to whether or not all children have a right to state-provided education, and if so, should this education respect the beliefs and customs of all groups and how on earth would this be accomplished; and a set of complex issues about the relation between education and social reform, centering upon whether education is essentially conservative, or whether it can be an (or, the) agent of social change. All educational activities, from classroom practice to curriculum decisions to the setting of policies at the school, district, state, and federal levels, inevitably rest upon philosophical assumptions, claims, and positions. Consequently, thoughtful and defensible educational practice depends upon philosophical awareness and understanding. To that extent, the philosophy of education is essential to the proper guidance of educational practice. Knowledge of philosophy of education would benefit not only teachers, administrators, and policy makers at all levels but also students, parents, and citizens generally. Societies that value education and desire that it be conducted in a thoughtful and informed way ignore the philosophy of education at their peril. Its relevance, reach, and potential impact make it perhaps the most fundamental and wide-ranging area of applied philosophy.

\_\_\_\_\_\_\_\_

Discussion on education focuses on micro level, meso level and macro level.

\_

1. The individual (the micro level):

These studies highlight concerns about individual identity and actions and about notions of hereditary differences, particularly IQ levels:

•The individual is seen as having high levels of choice. This approach recognises the importance of mentoring programmes to provide opportunities for broadening networks of influence for young people.

•Some research focuses on notions of inherited capability and intelligence that pre-ordains an individual’s ability to succeed in society. These inherited capabilities mean individuals have few opportunities to improve the position into to which they are born. This approach has been heavily criticised methodologically, theoretically and morally.

Education and personal growth:

The American philosopher John Dewey believed that education should mean the total development of the child. On the basis of the observations he made at the University of Chicago Laboratory Schools—the experimental elementary schools that he founded in 1896—Dewey developed revolutionary educational theories that sparked the progressive education movement in the United States. As he propounded in The School and Society (1899) and The Child and the Curriculum (1902), education must be tied to experience, not abstract thought, and must be built upon the interests and developmental needs of the child. He argued for a student-centred, not subject-centred, curriculum and stressed the teaching of critical thought over rote memorization. Later, in Experience and Education (1938), he criticized those of his followers who took his theories too far by disregarding organized subject matter in favour of vocational training or mere activity for their students. If prudently applied, progressive education could, Dewey believed, “shape the experiences of the young so that instead of reproducing current habits, better habits shall be formed, and thus the future adult society be an improvement on their own.” Concurrent pedagogies appeared in European institutions such as Ovide Decroly’s École de l’Ermitage (the Hermitage School), which envisioned students utilizing the classroom as a workshop, and Maria Montessori’s Casa dei Bambini (“Children’s House”), which incorporated experiential and tactile learning methods through students’ use of “didactic materials.”

\_

2. The immediate social context, which might be located in families, communities, schools and peer groups (the meso level):

These studies examine the social and cultural effects that peer groups, families and neighbourhoods have on young people and their understanding of, aspiration towards, and capability within schools. The studies also look at how schooling and other public services have aided or constrained educational achievement. The main themes in this work are:

•Poor neighbourhoods are characterised by a lack of employment and effective public services that is likely to affect self-esteem and a lack of resources that results in poor health and diet. All of these taken together affect the ability of families support young people through education.

•Different neighbourhoods and communities can provide different levels of social and cultural capital. These can alleviate some material aspects of poverty and improve opportunities for educational success for certain groups of young people.

•Effective parenting is central to young people’s educational success. This is linked to the educational aspirations of parents, support and stimulation for young people in the home, secure and stable home environments and participation within school.

•Schools can make a difference in ‘challenging’ areas. This is heavily influenced by the make-up of schools, the constraints that poverty exerts on the schools, the capabilities of teachers and the nature of educational markets in such areas.

•Improved public sector service delivery can improve access to and achievement within school but professional and organisational boundaries constrain effective multi-agency working.

\_

3. Social structures (the macro level):

These studies tend to see the relationship between poverty and education as resulting from underlying social structures (though, of course, individual characteristics and immediate social contexts also have an impact). Many analyse the impact of globalisation and the resulting forms of social exclusion. This is reflected in aspects of ‘ghettoization’, health inequalities, high levels of unemployment, poor housing and poor infrastructure for such individuals and communities. Together these factors are linked to, and compound, poor educational attainment.

\_

The individual and the society:

A number of interrelated problems and issues fall under this heading. What is the place of schools in a just or democratic society? Should they serve the needs of society by preparing students to fill specific social needs or roles, or should they rather strive to maximize the potential—or serve the interests—of each student? When these goals conflict, as they appear inevitably to do, which set of interests—those of society or those of individuals—should take precedence? Should educational institutions strive to treat all students equally? If so, should they seek equality of opportunity or equality of outcome? Should individual autonomy be valued more highly than the character of society? More generally, should educational practice favour a more-liberal view of the relation between the individual and society, according to which the independence of the individual is of fundamental importance, or a more-communitarian view that emphasizes the individual’s far-reaching dependence on the society in which he/she lives? These questions are basically moral and political in nature, though they have epistemological analogues with respect to critical thinking.

\_\_\_\_\_\_\_\_

Narrower and Broader Meaning of Education:

Education in the Narrower Sense:

In its narrow sense, school instruction is called education. In this process, the elders of society strive to attain predetermined aims during a specified time by providing pre-structured knowledge to children through set methods of teaching. The purpose is to achieve mental development of children entering school. To make of narrow meaning of education more clear, the following opinions of some other educationists are being given:

•The culture which each generation purposefully gives to those who are to be its successors, in order to qualify them for at least keeping up, and if possible for raising the level of improvement which has been attained. – John Stuart Mill

•In narrow sense, education may be taken to mean any consciously directed effort to develop and cultivate our powers. – S. S. Mackenzie

•Education is a process in which and by which knowledge, character and behaviour of the young are shaped and moulded. – Prof. Drever

•The influence of the environment of the individual with a view to producing a permanent change in his habits of behaviour, or thought and attitude. – G. H. Thompson

Education, in the narrower sense, is regarded as equivalent to instruction. It consists of the “specific influences” consciously designed in a school or in a college or in an institution to bring in the development and growth of the child. The word school includes the whole machinery of education from Kindergarten to the University. The education of the child begins with his admission in the school and ends with his departure from the University. The amount of education received by the child is measured in terms of degrees and diplomas awarded to him. The school represents formal education as it imparts education directly and systematically. There is deliberate effort on the part of the educator to inculcate certain habits, skills, attitudes or influences in the learner, which are considered to be essential and useful to him. According to John Dewey: “The school exists to provide a special environment for the formative period of human life. School is a consciously designed institution, the sole concern of which is to educate the child. This special environment is essential to explain our complex society and civilization”. The influences or modes of influences in the school are deliberately planned, chosen and employed by the community for the welfare of the members of the rising generation. The purpose of these influences is to modify the behaviour of the child in such a way that he may become different from what he would have been without education. It makes possible a better adjustment of human nature to surroundings. According to Mackenzie, education, in the narrower sense, is conscious effort to develop and cultivate our innate powers. Education, in the narrow sense, is also regarded as acquisition of knowledge. According to it education is a process by which knowledge or information on a subject is acquired. But many sensible educationists have criticized this view. They argue that emphasis on the knowledge is likely to reduce all schools to mere knowledge-shops. The acquisition of knowledge is not the only or supreme aim of education, yet it is one of the important aims of education.

\_

Education in the Broader Sense:

In its wider sense, education is the total development of the personality. In this sense education consists of all those experiences, which affect the individual from birth till death. Thus, education is that process by which an individual freely develops his self-according to his nature in a free and uncontrolled environment. In this way, education is a lifelong process of growth environment.

•In the wider sense, it is a process that goes on throughout life, and is promoted by almost every experience in life. – S. S. Mackenzie

•By education, I mean the all-round drawing out of the best in child and man’s body, mind and soul. – M. K. Gandhi

•Education in its widest sense includes all the influences, which at upon an individual during his passage from cradle to the grave. – Dumvile

•Education, in its broadest sense, is the means of the social continuity. – John Dewey

Education in the wider sense is a life-long process. It begins with the birth of a child and ends with his death. It is a continuous process. Continuity is the law of life. Education is not limited to the classroom only; it is also not limited to a particular period of life. Education is a life-long process and goes on from birth to death. Throughout life one goes on learning to adjust oneself to the changing patterns of life. Change it’s the fundamental law of human existence. Life is a continuous process of growth and development and so education is also a continuous process. An individual learns through his experiences, which are acquired throughout his life. Education is not merely collection of some information. It is acquisition of experiences through life in the social and natural environment. It includes all the knowledge and experiences, acquired during infancy, childhood, boyhood, adolescence, youth, manhood or old age through any agency of education- the press, the travels, the club, the nature- formally and informally. Thus, education becomes the sum-total of all experiences that the child receives either in the school or outside. In this wider sense, life is education and education is life. Whatever broadens our horizon, deepens our insight, refines our reactions and stimulates thought and feeling, educates us. In other words, education is the process whereby a human being gradually adopts himself in various ways to his physical, social, and spiritual environments. It is the development of all those capacities in the individual, which will enable him to control his environment and fulfil his possibilities. Education, in the broader sense, is transmission of life by the living, to the living, through living and for living. Education is a means for the development of balanced all- round harmonious development of personality. Personality includes not only body and mind but also spirit.

\_\_\_\_\_\_\_\_

Education as a process:

Education is a process here; process means continuous changes that take place through which a child attains knowledge, skills, attitudes, and other abilities required for leading a productive life in the society, as a product, education is the aggregate of what is acquired through learning, i.e. the knowledge skills, ideas, and values. Educative process teacher can bring out the hidden talents in the child by the way of creating a conductive environment. Based on factors involved in the educative process it can be viewed as a bi-polar, tri-polar, or multi-polar process.

\_

Education as a bipolar process:

Education as a bipolar process believes that education is an end result of the interaction between the educator or teacher and the student. Teacher imparts knowledge to the students with an intension to change latter’s behavior. Educationalists like Adams and Ross believe that education is essentially a bipolar process and recommends close co-operation and better understanding between the teachers and students for achieving the aims of education. Teacher should always consider the level of students. Even though teacher-student interaction is a vital component of the educative process, we cannot ignore the influence of social environment and technological advancement on the education system. In this sense, it is difficult to view education as a bi polar process.

\_

Education as tri-polar process:

A considerable proportion of educationalists believe that education is a tri-polar process involving the interaction between the student, the teacher and the social environment, John Dewey believed that education is essentially a tri polar process. This view motivated educationalist to consider the societal change and social environment while constructing the curriculum. Tri-polar process justifies the bilateral relationship between the society and education. Without undermining the contributions of the tri-polar approach for the progress of education in the past, we have to say that it is incompetent to address the current issues in the educative process as of ignores the role of media and technology in the field of education.

\_

Education as a multi-polar process:

In order to cope with the fast changing and competitive nature of the world, one has to wake up the responsibility for his or her own education. This new self-learning concept of education is influenced by several factors along with the teacher, student and the social environment. Easy access to knowledge due to the technological advancement and the increased acceptance of non-formal and informal types of education has reduced the importance of teacher and school when compared to past. Different from the past, present day education is flexible; more students centered, focused on creativity than mere spoon feeding by the teacher and depend heavily on technological advancements. In the present context, it is difficult to predict precisely what all factors will influence the education in what all ways. From the above said points, it is evident that the educative process is neither a bi-polar process nor a tri-polar process but a multi-polar process only.

\_\_\_\_\_\_\_

Education as a lifelong process:

Education is now interpreted not as referring to an initial period of training of youth, but to a continual and lifelong process. It is not something that concerns itself with certain aims or philosophies nor does its responsibility end with devising some classroom technique for the teacher. Education today aims at elevating itself to the level of a complex and comprehensive science with border objectives. It now attempts to relate itself not merely to pedagogy but is conceived as Andragogy, which according to Pierre further, is the science of training man throughout his life span.

\_

Life-long learning:

What do we mean by lifelong learning?

European Commission (2001) defined life-long learning as “All learning activity undertaken throughout life, with the aim of improving knowledge, skills and competences within a personal, civic, social and/or employment related perspective”

\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_

Different education models:

\_

Banking education model:

In this form of education, it is the job of the teacher to deposit in the minds of the learners, considered to be empty or ignorant, bits of information or knowledge, much like we deposit money in a [empty] bank account. This is why Freire called this model of education ‘banking education’. Freire criticized this model of education because he believed that it makes the students into passive objects to be acted upon by the teacher. He argued that the goal of ‘banking education’ is to demobilise the people within the existing establishment of power by conditioning them to accept the cultural, social, political status quo of the dominant culture. In the banking education model knowledge/education is seen as a gift given to the student by the teacher who considers the learner as marginal, ignorant and resource-less. Freire saw this as false generosity from the dominant group (oppressors) and a way of dominating and controlling the people (the oppressed) to improve or maintain their own interests. Freire put forward the notion that authoritarian forms of education such as banking education prevented learners from ‘knowing’ the world and from seeing it as something which can be changed. He believed that authoritarian forms of education inhibited the liberation and freedom of the oppressed. The banking education maintains and even stimulates the contradiction through the following attitudes and practices, which mirror oppressive society as a whole: (a) the teacher teaches and the students are taught; (b) the teacher knows everything and the students know nothing; (c) the teacher thinks and the students are thought about; (d) the teacher talks and the students listen-meekly; (e) the teacher disciplines and the students are disciplined; (f) the teacher chooses and enforces his choice, and the students comply; (g) the teacher acts and the students have the illusion of acting through the action of the teacher; (h) the teacher chooses the program content, and the students (who were not consulted) adapt to it; (i) the teacher confuses the authority of knowledge with his own professional authority, which he sets in opposition to the freedom of the students; (j) the teacher is the subject of the learning process, while the pupils are mere objects. It is not surprising that the banking concept of education regards men as adaptable, manageable beings, the more the students work at storing the deposits entrusted to them, the less they develop the critical consciousness which would result from their intervention in the world. The more completely they accept the passive role imposed on them, the more they tend simply to adapt to the world as it is and to the fragmented view of reality deposited in them. Freire argued that change could come through a process of dialogue and reflection leading on to change through action or intervention and or political change. Freire called this process Praxis. Some of the tools a banking education model might use include a pre-prescribed curriculum, syllabus or course book, which either takes no account or makes assumptions of learners’ views or knowledge of the world. Freire called these pre-prescribed plans and course books as primers. Freire saw no use for traditional primers. A “one size fits all” education system is failing in some children and more must be done to ensure children get the schooling they need.

\_\_

Problem posing education model:

To challenge the banking education model, Freire proposed a problem-posing model of education. In this model, the teacher and the learner discuss and analyse their experiences, feelings and knowledge of the world together. Instead of the belief that learners’ and teacher’s situation in the world is fixed, as the banking model suggests, the problem-posing model explores problems or realities people find themselves in as something which can be transformed. Freire’s “problem posing concept of education” is based on his “anthropological concept of culture” which is based on Freire’s distinction between animals and humans. For Paulo Freire, “man is the only one to treat not only his actions but his very self as the object of his reflection; the capacity distinguished him from the animals, which are unable to reflect upon it.” Animals are “beings in themselves”, are “ahistorical”, are “merely stimulated”, “animals cannot commit themselves”. It is not the job of the teacher to provide answers to the problems, but to help the learners achieve a form of critical thinking about the situation (Freire called this conscientization). This makes it possible to understand that the world or society is not fixed and is potentially open to transformation. It becomes possible to imagine a new and different reality. In order for students to be able to confront oppression, they must first become critical thinkers.

–Freire believes that critical thinking is not possible in a banking education framework, but only in a problem-posing educational framework. In the banking system of education, students are primarily asked to memorize and regurgitate often meaningless and disjointed facts; whereas in a problem-posing framework, students are asked to use critical thinking skills to investigate various problems that exist in the world.

–Whereas banking education anesthetizes and inhibits creative power, problem-posing education involves a constant unveiling of reality.

–The former attempts to maintain the submersion of consciousness; the latter strives for the emergence of consciousness and critical intervention in reality.

Students under this framework would pose problems and then critically investigate why those problems exist. Freire believes that a problem-posing education will not only allow students to become critical thinkers, but reveal that the world is constantly undergoing change.

\_\_

Learning circle education model:

The learning circle is a non-hierarchal ‘class’ model where participants can discuss generative themes which have significance within the context of their lives. This involves creating a democratic space where every ones’ voice has equal weight age. The conditions needed for this have to be actively created as it does not often occur naturally. This can mean challenging cultural, gender and other status related power relationships and stratifications. This ―critical and liberating dialogue, also known as ―culture circles, is the heart of Freire’s pedagogy. The circles consist of somewhere between 12 and 25 students and some teachers, all involved in dialogic exchange. The role of the ―teachers in this civic education is to participate with the people/students in these dialogues. As Freire worked with illiterate adult peasants, he insisted that the learning circles use the ways of speaking and the shared understandings of the peasants themselves. In the circles the learners identify their own problems and concerns and seek answers to them in the group dialogue. Dialogue focuses on what Freire called ―codifications, which are representations of the learner’s day-to-day circumstances. Participants explore generative themes which are of interest to them. A generative theme is a cultural or political topic of great concern or importance to participants, from which discussion can be generated. These generative themes are then represented in the form of ‘codifications’ (either represented by a word or short phrase or a visual representation – a picture or photograph). Participants are able to step back from these visual representations of their ideas or history and decode or explore them critically by regarding them objectively rather than simply experiencing them. This makes it possible for the participants to intervene and initiate change in society. Freire initially concerned himself with literacy learning. The codifications (visuals) prompted discussion, phrases and words which learners would use to develop their skills. This method of learning literacy through meaningful discussions generated from ‘codifications’ has been very successful. However, Freire emphasises that the process should not be carried out mechanically but through creatively “awakening [the] consciousness” of the learner. Codifications may be photographs, drawings, poems, even a single word. As representations, codifications abstract the daily circumstances. For example, a photograph of workers in a sugar cane field permits workers to talk about the realities of their work and working conditions without identifying them as the actual workers in the photograph. This permits the dialogue to steer toward understanding the nature of the participants’ specific circumstances but from a more abstract position. Teachers and learners worked together to understand the problems identified by the peasants, a process that Freire calls ―decoding, and to propose actions to be taken to rectify or overturn those problems. The circles therefore have four basic elements: 1) problem posing, 2) critical dialogue, 3) solution posing, and 4) plan of action. The goal, of course, is to overcome the problems, but it is also to raise the awareness, the critical consciousness (conscientization), of the learners so as to end oppression in their individual and collective lives.

\_\_

Positive education:

Positive education is an approach to education that draws on positive psychology’s emphasis of individual strengths and personal motivation to promote learning. Unlike traditional school approaches in which teachers attempt to tailor their material to a mythical “average” student, and move the class altogether using the material through one teaching and testing style, positive schooling teachers use techniques that focus on the well-being of individual students. Teachers use methods such as developing tailored goals for each student to engender learning and working with them to develop the plans and motivation to reach their goals. Rather than pushing students to achieve at a set grade level, seen through the emphasis of standardized testing, this approach attempts to customize learning goals to individual students’ levels. Instead of setting students to compete against one another, learning is viewed as a cooperative process where teachers learn to respect their students and each student’s input is valued.

\_\_\_

Progressive education:

Progressive education is a pedagogical movement that began in the late nineteenth century; it has persisted in various forms to the present. The term progressive was engaged to distinguish this education from the traditional Euro-American curricula of the 19th century, which was rooted in classical preparation for the university and strongly differentiated by social class. By contrast, progressive education finds its roots in present experience. Most progressive education programs have these qualities in common:

•Emphasis on learning by doing – hands-on projects, expeditionary learning, experiential learning

•Integrated curriculum focused on thematic units

•Integration of entrepreneurship into education

•Strong emphasis on problem solving and critical thinking

•Group work and development of social skills

•Understanding and action as the goals of learning as opposed to rote knowledge

•Collaborative and cooperative learning projects

•Education for social responsibility and democracy

•Highly personalized education accounting for each individual’s personal goals

•Integration of community service and service learning projects into the daily curriculum

•Selection of subject content by looking forward to ask what skills will be needed in future society

•De-emphasis on textbooks in favor of varied learning resources

•Emphasis on lifelong learning and social skills

•Assessment by evaluation of child’s projects and productions

\_\_\_\_\_

Formal education vs. progressive education:

If there is a core theme to the formal position it is that education is about passing on information; for formalists, culture and civilization represent a store of ideas and wisdom which have to be handed on to new generations. Teaching is at the heart of this transmission; and the process of transmission is education… While progressive educators stress the child’s development from within, formalists put the emphasis, by contrast, on formation from without— formation that comes from immersion in the knowledge, ideas, beliefs, concepts, and visions of society, culture, civilization. There are, one might say, conservative and liberal interpretations of this world view— the conservative putting the emphasis on transmission itself, on telling, and the liberal putting the emphasis more on induction, on initiation by involvement with culture’s established ideas. As both Thomas and Dewey (1938) have argued, these distinctions are problematic. A lot of the debate is either really about education being turned, or slipping, into something else, or reflecting a lack of balance between the informal and formal. In the ‘formal tradition’ problems often occur where people are treated as objects to be worked on or ‘moulded’ rather than as participants and creators i.e. where education slips into ‘schooling’. In the ‘progressive tradition’ issues frequently arise where the nature of experience is neglected or handled incompetently. Some experiences are damaging and ‘mis-educative’. They can arrest or distort ‘the growth of further experience’. The problem often comes when education drifts or moves into entertainment or containment. Involvement in the immediate activity is the central concern and little attention is given to expanding horizons, nor to reflection, commitment and creating change. The answer to the question ‘what is education?’ can apply to both these ‘informal’ forms that are driven and rooted in conversation – and to more formal approaches based in curriculum. The choice is not between what is ‘good’ and what is ‘bad’ – but rather what is appropriate for people in this situation or that. There are times to use transmission and direct teaching as methods, and moments for exploration, experience and action. It is all about getting the mix right, and framing it within the guiding eidos and disposition of education.

\_\_\_\_\_\_\_\_

Inclusive education:

\_

\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_

Critical thinking:

Many educators and educational scholars have championed the educational aim of critical thinking. It is not obvious what critical thinking is, and philosophers of education accordingly have developed accounts of critical thinking that attempt to state what it is and why it is valuable—i.e., why educational systems should aim to cultivate it in students. These accounts generally (though not universally) agree that critical thinkers share at least the following two characteristics: (1) they are able to reason well—i.e., to construct and evaluate various reasons that have been or can be offered for or against candidate beliefs, judgments, and actions; and (2) they are disposed or inclined to be guided by reasons so evaluated—i.e., actually to believe, judge, and act in accordance with the results of such reasoned evaluations. Beyond this level of agreement lie a range of contentious issues. One cluster of issues is epistemological in nature. What is it to reason well? What makes a reason, in this sense, good or bad? More generally, what epistemological assumptions underlie (or should underlie) the notion of critical thinking? Does critical thinking presuppose conceptions of truth, knowledge, or justification that are objective and “absolute,” or is it compatible with more “relativistic” accounts emphasizing culture, race, class, gender, or conceptual scheme? These questions have given rise to other, more specific and hotly contested issues. Is critical thinking relevantly “neutral” with respect to the groups who use it, or is it in fact politically biased, unduly favouring a type of thinking once valued by white European males—the philosophers of the Enlightenment and later eras—while undervaluing or demeaning types of thinking sometimes associated with other groups, such as women, non-whites, and non-Westerners—i.e., thinking that is collaborative rather than individual, cooperative rather than confrontational, intuitive or emotional rather than linear and impersonal? Do standard accounts of critical thinking in these ways favour and help to perpetuate the beliefs, values, and practices of dominant groups in society and devalue those of marginalized or oppressed groups? Is reason itself, as some feminist and postmodern philosophers have claimed, a form of hegemony? Other issues concern whether the skills, abilities, and dispositions that are constitutive of critical thinking are general or subject-specific. In addition, the dispositions of the critical thinker noted above suggest that the ideal of critical thinking can be extended beyond the bounds of the epistemic to the area of moral character, leading to questions regarding the nature of such character and the best means of instilling it.

\_\_\_\_\_\_\_

Moral education:

Another set of problems and issues has to do with the proper educational approach is morality. Should education strive to instil particular moral beliefs and values in students? Or should it aim rather to enhance students’ ability to think through moral issues for themselves? If the latter, how should educators distinguish between good and bad ways to think about moral issues? Should moral education focus on students’ character—rather than on either the inculcation of particular beliefs and values or the development of the ability to think well about moral matters—and endeavour to produce particular traits, such as honesty and sensitivity? Or are all these approaches problematic in that they inevitably involve indoctrination (of an undesirable kind)? A related objection to the approaches mentioned is that moral beliefs and values are in some sense relative to culture or community; therefore, attempts to teach morality at least presuppose an indefensible moral absolutism and may even constitute a kind of moral “imperialism.” These large and complex questions are intimately connected with metaethics and moral epistemology—i.e., the part of moral philosophy concerned with the epistemic status of moral claims and judgments. Moral psychology and developmental psychology are also highly relevant to the resolution of these questions.

\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_

Early childhood education:

The very definition of early childhood education varies greatly among organizations, schools and governments. The National Association for the Education of Young Children, the world’s largest advocacy organization devoted to early childhood learning, defines it as high-quality programs — emphasis on “high quality” — geared toward children from birth to age 8 (or third grade). Increasingly, many colleges are expanding their early-education programs to include learning techniques for infants and toddlers. However, many states, as well as the federal government, focus early-education initiatives primarily on preschool or prekindergarten (3- or 4-year-olds).

\_

Why is Early Childhood Education Important?

•Far too many children enter school not prepared.

•When unprepared children begin school behind, they tend to fall further and further behind.

•Children who are at risk of not doing well in school gain significant benefits from quality childcare.

•All children need to enter school ready and able to succeed.

\_

Importance of early childhood education:

Research has shown that much of what you need to succeed in life is established before you enter kindergarten. During that time, the human brain undergoes rapid development; it’s a period when a child builds cognitive skills — the foundation for reading, math, science and academics — as well as character skills, social-emotional growth, gross-motor skills and executive functioning, which includes everything from impulse control to problem solving. Academic achievement, of course, is one of the main benefits of early childhood learning. Children who attend early-learning programs demonstrate higher levels of school achievement and better social adjustment than those who have no formal early education. They’re less likely to repeat a grade or be placed in special education classes, since learning issues can be identified and mediated early. Children who have had formal early-learning experiences are also more likely to graduate from high school. Other benefits go far beyond academics. A lack of formal early-learning experiences has a negative impact on the entire country — economically and socially. Every child benefits from early learning, whether it’s practiced in a formal school setting or at home with parents or caregivers. The research — most notably the Perry Preschool Study, which tracked the lives of 123 young children born into poverty — has shown that kids from low-income and disadvantaged communities have even more to gain from early education. In this study, which began in 1962, 3- and 4-year-olds were divided into two groups: One received high-quality preschool programming and one did not. By age 40, those who had attended preschool had higher earnings, were more likely to hold a job, had committed fewer crimes and were more likely to have graduated from high school than adults who did not attend preschool. Those are pretty remarkable results. According to some studies, children enrolled in these programs are more behaved and have higher IQ scores upon enrolling kindergarten than their peers without formal education. In addition to benefiting children experiencing normal development, it was also shown that children with learning or other physical disabilities benefit immensely from pre-kindergarten education. Critics of pre-kindergarten education claim the differences between children enrolled in pre-school programs and children not receiving formal education are only discernible during kindergarten, first, and second grade. During subsequent years, children who’ve not received formal education prior to kindergarten test at the same level and behave like their peers with pre-kindergarten formal education.

\_

Benefits of early childhood education:

Cognitively:

•Improves school performance

•Raises math and language abilities

•Sharpens thinking/attention skills

•Reduces special education placement

•Lowers school drop-out rates

\_

Socially and emotionally:

•Improves and strengthen interactions with peers

•Decreases problem behaviors

•Encourages more exploratory behavior

•Helps adjustment to the demands of formal schooling

\_

Long-term positive results and cost savings of Early Childhood Education:

•Increases lifelong earning potential

•Achieves better academic outcomes

•Lowers rates of teen pregnancy and incarceration

•Improves recruitment and retention of parents who work

\_\_\_\_\_\_

Neurosciences in education:

Recent developments in the neurosciences are increasingly attracting the interest of the education community seeking to better understand the interactions between biological processes and human learning. While it may still be premature for such developments to inform education policy, their potential to improve teaching and learning practices shows great promise. For example, the latest insights into how the brain develops and operates at different stages in life are contributing to our understanding of how and when we learn. Some of the most significant insights concern the ‘sensitive periods’ of learning activities, indicating language acquisition is at its peak at an early age. This underlines the importance of early childhood education and the potential for multiple language learning in the early years. Other findings point to the ‘plasticity’ of the brain and its capacity to change in response to environmental demands throughout life. This supports the idea of lifelong learning and the provision of appropriate learning opportunities for all regardless of age. In addition, we must acknowledge the impact of environmental factors such as nutrition, sleep, sport and recreation on optimal brain functioning. Equally important, we must acknowledge the need for holistic approaches that recognize the close interdependence of physical and intellectual well-being, as well as the interplay of emotional, cognitive, analytical and creative brain. The new research directions in neurosciences will add to our understanding of the nature-nurture relationship, helping us thereby to fine-tune our educational initiatives. One of the most important lessons to derive from brain research is that in a very important sense, all learning is experiential. What we learn depends on the global experience, not just on the manner of presentation. We do not automatically learn enough from our experience. What matters is how experience is used. …in deliberately teaching for the expansion of natural knowledge, we need both to help students have appropriate experiences and to help them capitalize on the experiences.

\_

Teaching reading skills is one of the best ways to save an aging brain:

Carlson is running a study called the Experience Corps Trial, in which older men and women volunteer to teach reading skills to kindergarten through third graders in Baltimore city schools. Using brain-imaging studies, Carlson and her colleagues have shown that after just a few months, people who volunteer show beneficial changes in their brains similar to those that other research teams have seen with exercise.

\_\_\_\_\_\_\_

\_\_\_\_\_\_\_

Instructors and teachers:

Instruction is the facilitation of another’s learning. Instructors in primary and secondary institutions are often called teachers, and they direct the education of students and might draw on many subjects like reading, writing, mathematics, science and history. Instructors in post-secondary institutions might be called teachers, instructors, or professors, depending on the type of institution; and they primarily teach only their specific discipline. Studies from the United States suggest that the quality of teachers is the single most important factor affecting student performance, and that countries which score highly on international tests have multiple policies in place to ensure that the teachers they employ are as effective as possible. With the passing of NCLB in the United States (No Child Left Behind), teachers must be highly qualified. A popular way to gauge teaching performance is to use student evaluations of teachers (SETS), but these evaluations have been criticized for being counterproductive to learning and inaccurate due to student bias.

\_

Arthur Chickering and Zelda Gamson focus on the pedagogy, the teacher’s “how,” rather than content and subject matter being taught, which is partly due to the scarce empirical research that has been done on college curriculum. Chickering and Gamson give seven research-supported principles regarding education and learning in the undergraduate environment for teachers to follow:

1. Teachers are to encourage contact between students and faculty. Chickering and Gamson explain that student-faculty relationships give students motivation to keep working hard to strive for future goals and also provide support and resources.

2. To develop reciprocity and cooperation among students, promoting a collaborative learning environment, rather than a competitive one. This gives students opportunities to work together and learn from one another, which has been shown to strengthen understanding.

3. Teachers are to use active learning techniques, relating material to topics that students already have an interest in and getting students to ask, “What does this concept look like in my own life?”

4. Teachers are to give prompt feedback. Balancing assessment and feedback results in efficient learning, as students realize what they do and do not know and learn to assess themselves.

5. Emphasizing time on task, or sharing effective time management strategies to give students an understanding for their time expectations.

6. Communicating high expectations has shown to be very successful. Expectations that teachers implement give students a gage for how much potential they think that they have.

7. Respecting students’ diverse talents and ways of learning accounts for all learning styles and allows students to figure out how they learn best.

\_

Teacher education:

It stands to reason that if students are changing, teachers must change too. More specifically, it is time to modify teacher education to reflect the demands of the modern K – 12 classrooms. There are policy and practice changes taking place all over the world – many driven by teachers – that address the cultural shifts in the classroom. Public education needs teachers who are better trained to meet the needs of specific student populations, understand the necessary role of distance learning, and are willing to speak up to facilitate classroom change. Without these teachers, effective reform to meet global demand is not possible.

\_

School discipline:

Discipline is the required action by a teacher toward a student (or group of students), after the student’s behavior disrupts the ongoing educational activity or breaks a preestablished rule created by the teacher, the school administration or the general society. Discipline, guiding children’s behavior, or setting limits are all concerned with helping children learn how to take care of themselves, other people, and the world around them. Discipline is an art that requires knowledge, skill, sensitivity, and self-confidence. Like any art, it is one that you will acquire through training and experience and it becomes easier with practice. Some people confuse discipline with classroom management. Discipline is one dimension of classroom management. Classroom management is a general term. Discipline is a major component of education because

• If the teacher does not maintain the discipline in the classroom, the teaching and learning process cannot be accomplished. It is a first step in creating a learning environment.

• As socialization agents, teachers have to teach their students which behaviors are expected in which situations. Hence, through their own actions and reactions, teachers transmit the messages to children about their expectations for proper behavior in particular situations.

Schools and their teachers have always been under pressure — for instance, pressure to cover the curriculum, to perform well in comparison to other schools, and to avoid the stigma of being “soft” or “spoiling” toward students. Forms of discipline, such as control over when students may speak, and normalized behaviour, such as raising a hand to speak, are imposed in the name of greater efficiency. Practitioners of critical pedagogy maintain that such disciplinary measures have no positive effect on student learning. Indeed, some argue that disciplinary practices detract from learning, saying that they undermine students’ individual dignity and sense of self-worth—the latter occupying a more primary role in students’ hierarchy of needs.

\_\_

Learning objectives:

In education, learning objectives are brief statements that describe what students will be expected to learn by the end of school year, course, unit, lesson, project, or class period. In many cases, learning objectives are the interim academic goals that teachers establish for students who are working toward meeting more comprehensive learning standards. Defining learning objective is complicated by the fact that educators use a wide variety of terms for learning objectives, and the terms may or may not be used synonymously from place to place. For example, the terms student learning objective, benchmark, grade-level indicator, learning target, performance indicator, and learning standard—to name just a few of the more common terms—may refer to specific types of learning objectives in specific educational contexts. Learning objectives are a way for teachers to structure, sequence, and plan out learning goals for a specific instructional period, typically for the purpose of moving students toward the achievement of larger, longer-term educational goals such as meeting course learning expectations, performing well on a standardized test, or graduating from high school prepared for college. For these reasons, learning objectives are a central strategy in proficiency-based learning, which refers to systems of instruction, assessment, grading, and academic reporting that are based on students demonstrating understanding of the knowledge and skills they are expected to learn before they progress to the next lesson, get promoted to the next grade level, or receive a diploma (learning objectives that move students progressively toward the achievement of academic standards may be called performance indicators or performance benchmarks, among other terms). Learning objectives are also a way to establish and articulate academic expectations for students so they know precisely what is expected of them. When learning objectives are clearly communicated to students, the reasoning goes, students will be more likely to achieve the presented goals. Conversely, when learning objectives are absent or unclear, students may not know what’s expected of them, which may then lead to confusion, frustration, or other factors that could impede the learning process. Learning objectives are also increasingly being used in the job-performance evaluations of teachers.

\_\_

Student:

A student (also pupil) is a learner, or someone who attends an educational institution. Education is not solely about the provision of information to students. Students also play a role in the education process. One of the ways they do so is in employing effective study techniques. Unfortunately, there are a number of myths about effective studying techniques for students. For instance, many educators encourage elaborate study techniques, like concept-mapping, claiming that they improve the encoding of information into memory. Recent research suggests it is more beneficial for recall to practice retrieving information than using elaborate encoding techniques. Students’ time is better spent practicing free recall of information studied than employing complex study techniques.

\_

Learning from Students:

Most teachers are accustomed to feedback from principals and coaches, but some have started hearing from the people who know them best: students. Last year, over a million K–12 students took surveys developed by educational services companies to rate how well their teachers teach, and many others took locally developed surveys. A growing number of states and districts allow the use of these surveys as part of teacher evaluation systems, and a few even require their use. For example, student surveys account for 5 percent of teachers’ evaluation scores in Memphis and for 15 percent in the Pittsburgh Public Schools. Students watch teachers deliver lessons every day and can make observations that help expose blind spots in their practice. The trend is driven, in part, by studies suggesting that surveys are valid and reliable predictors of student outcomes. For example, they were stronger predictors of achievement gains than any other assessments studied in the Measures of Effective Teaching (MET) project, including classroom observations.

\_

Student aid:

Student aid, a form of assistance designed to help students pay for their education. In general, such awards are known as scholarships, fellowships, or loans; in European usage, a small scholarship is an exhibition, and a bursary is a sum granted to a needy student. Many awards are in the nature of long-term loans with low rates of interest. In many countries, government subsidies reduce or eliminate tuition and the cost of room and board and other expenses, and in still others students receive allowances for extra expenses.

\_

Parental involvement:

Parental involvement is an essential aspect of a child’s educational development. Early and consistent parental involvement in the child’s life is critical such as reading to children at an early age, teaching patterns, interpersonal communication skills, exposing them to diverse cultures and the community around them, educating them on a healthy lifestyle, etc. The socialization and academic education of a child are aided by the involvement of the student, parent(s), teachers, and others in the community and extended family.

\_\_\_\_\_\_\_\_

K-12

The K-12 education is the term used to denote the education imparted in the primary and secondary phases of a school life, including K or kindergarten to 12 which stands for the 12th standard (12th grade or class 12). This particular system covers the education from kindergarten till the 12th grade. The expression is a shortening of kindergarten (K) for 4- to 6-year-olds through twelfth grade (12) for 17- to 19-year-olds, the first and last grades of free education in these countries, respectively.

\_

Preschool:

Preschools provide education from ages approximately three to seven, depending on the country, when children enter primary education. These are also known as nursery schools and as kindergarten, except in the US, where kindergarten is a term used for primary education. Kindergarten provides a child-centered, preschool curriculum for three- to seven-year-old children that aim[s] at unfolding the child’s physical, intellectual, and moral nature with balanced emphasis on each of them.

Primary:

Primary (or elementary) education consists of the first five to seven years of formal, structured education. In general, primary education consists of six to eight years of schooling starting at the age of five or six, although this varies between, and sometimes within, countries. Globally, around 89% of children aged six to twelve are enrolled in primary education and this proportion is rising. Under the Education For All programs driven by UNESCO, most countries have committed to achieving universal enrolment in primary education by 2015, and in many countries, it is compulsory. The division between primary and secondary education is somewhat arbitrary, but it generally occurs at about eleven or twelve years of age. Some education systems have separate middle schools, with the transition to the final stage of secondary education taking place at around the age of fourteen. Schools that provide primary education are mostly referred to as primary schools or elementary schools. Primary schools are often subdivided into infant schools and junior school. In India, for example, compulsory education spans over twelve years, with eight years of elementary education, five years of primary schooling and three years of upper primary schooling. Various states in the republic of India provide 12 years of compulsory school education based on a national curriculum framework designed by the National Council of Educational Research and Training.

Secondary:

In most contemporary educational systems of the world, secondary education comprises the formal education that occurs during adolescence. It is characterized by transition from the typically compulsory, comprehensive primary education for minors, to the optional, selective tertiary, “postsecondary”, or “higher” education (e.g. university, vocational school) for adults. Depending on the system, schools for this period, or a part of it, may be called secondary or high schools, gymnasiums, lyceums, middle schools, colleges, or vocational schools. The exact meaning of any of these terms varies from one system to another. The exact boundary between primary and secondary education also varies from country to country and even within them, but is generally around the seventh to the tenth year of schooling. Secondary education occurs mainly during the teenage years. In the United States, Canada and Australia, primary and secondary education together are sometimes referred to as K-12 education, and in New Zealand Year 1–13 is used. The purpose of secondary education can be to give common knowledge, to prepare for higher education, or to train directly in a profession.

Tertiary (higher):

Higher education, also called tertiary, third stage, or postsecondary education, is the non-compulsory educational level that follows the completion of a school such as a high school or secondary school. Tertiary education is normally taken to include undergraduate and postgraduate education, as well as vocational education and training. Colleges and universities mainly provide tertiary education. Collectively, these are sometimes known as tertiary institutions. Individuals who complete tertiary education generally receive certificates, diplomas, or academic degrees. Higher education typically involves work towards a degree-level or foundation degree qualification. In most developed countries a high proportion of the population (up to 50%) now enter higher education at some time in their lives. Higher education is therefore very important to national economies, both as a significant industry in its own right, and as a source of trained and educated personnel for the rest of the economy. Higher-educational institutions include not only universities and colleges but also various professional schools that provide preparation in such fields as law, theology, medicine, business, music, and art. Higher education also includes teacher-training schools, junior colleges, and institutes of technology. The basic entrance requirement for most higher-educational institutions is the completion of secondary education, and the usual entrance age is about 18 years. University education includes teaching, research, and social services activities, and it includes both the undergraduate level (sometimes referred to as tertiary education) and the graduate (or postgraduate) level (sometimes referred to as graduate school). Universities are generally composed of several colleges. In the United States, universities can be private and independent like Yale University; public and state-governed like the Pennsylvania State System of Higher Education; or independent but state-funded like the University of Virginia. A number of career specific courses are now available to students through the Internet.

\_\_

Degree:

Degree, also called academic degree in education, any of several titles conferred by colleges and universities to indicate the completion of a course of study or the extent of academic achievement. There are four major categories of degrees available for postsecondary students: associate, bachelor’s, master’s and doctoral degrees. Diplomas are similar to certificates, and they’re often awarded through community or technical schools. For instance, a diploma of nursing is offered as an alternative to an associate’s degree or bachelor’s degree. Earning one of these degrees can take 2-8 years, depending on the level of the degree and field of study. Graduate-level programs may require students to complete one or more undergraduate programs prior to enrolment. The hierarchy of degrees dates back to the universities of 13th-century Europe, which had faculties organized into guilds. Members of the faculties were licensed to teach, and degrees were in effect the professional certifications that they had attained the guild status of a “master.” There was originally only one degree in European higher education, that of master or doctor. The baccalaureate, or bachelor’s degree, was originally simply a stage toward mastership and was awarded to a candidate who had studied the prescribed texts in the trivium (grammar, rhetoric, and logic) for three or four years and had successfully passed examinations held by his masters. The holder of the bachelor’s degree had thus completed the first stage of academic life and was enabled to proceed with a course of study for the degree of master or doctor. After completing those studies, he was examined by the chancellor’s board and by the faculty and, if successful, received a master’s or doctor’s degree, which admitted him into the teachers’ guild and was a certificate of fitness to teach at any university. In the United States and Great Britain, the modern gradation of academic degrees is usually bachelor (or baccalaureate), master, and doctor. The bachelor’s degree marks the completion of undergraduate study, usually amounting to four years. The master’s degree involves one to two years’ additional study, while the doctorate usually involves a lengthier period of work. British and American universities customarily grant the bachelor’s as the first degree in arts or sciences. After one or two more years of coursework, the second degree, M.A. or M.S., may be obtained by examination or the completion of a piece of research. At the universities of Oxford and Cambridge, holders of a B.A. can receive an M.A. six or seven years after entering the university simply by paying certain fees. The degree of doctor of philosophy (Ph.D.) is usually offered by all universities that admit advanced students and is granted after prolonged study and either examination or original research. A relatively new degree in the United States is that of associate, which is awarded by junior or community colleges after a two-year course of study; it has a relatively low status. The rapid expansion of specialization produced a growing variety of specific academic degrees in American, British, and other English-speaking higher education systems in the 20th century. More than 1,500 different degrees are now awarded in the United States, for example, with the largest number in science, technology, engineering, medicine, and education. In Japan the usual degrees are the gakushi (bachelor), granted after four years of study, and hakushi (doctor), requiring from two to five years of additional study. A master’s degree (shushi) may also be granted. In addition to earned degrees, universities and colleges award honorary degrees, such as L.H.D. (Doctor of Humanities), Litt.D. (Doctor of Literature), and D.C.L. (Doctor of Civil Law), as a recognition of distinction without regard to academic attainment.

\_

Cooling out:

Cooling out is an informal set of practices used by colleges, especially two-year, junior, and community colleges, to handle students whose lack of academic ability or other resources prevent them from achieving the educational goals they have developed for themselves such as attaining a bachelor’s degree. The purpose of cooling out is to encourage the students to adjust their expectations or redefine failure. The practices contrast with “warming up”, in which students who aspire to easier educational goals are encouraged to reach for more ambitious degrees.

\_

Dumbing down:

Dumbing down is the deliberate oversimplification of intellectual content within education, literature, cinema, news, and culture in order to relate to those unable to assimilate more sophisticated information. Dumbing-down varies according to subject matter along with the reasons for lowering the intellect of the subject or topic. It often involves diminishment of critical thought involving the undermining of intellectual standards within language and learning; thus trivializing meaningful information, culture, and academic standards. Philosophically, the term “dumbing down” is a relative definition, because what is considered dumbing down depends on the taste, value judgement, and intellectual level of the person involved in the matter. A high school physics instructor, Wellington Grey, published an Internet petition in which he said: “I am a physics teacher. Or, at least, I used to be”; and complained that “[Mathematical] calculations – the very soul of physics – are absent from the new General Certificate of Secondary Education.” Among the examples of dumbing-down that he provided were: “Question: Why would radio stations broadcast digital signals, rather than analogue signals? Answer: Can be processed by computer/ipod”.

\_\_\_\_\_\_\_\_

Curriculum and academic discipline:

In formal education, a curriculum is the set of courses and their content offered at a school or university. As an idea, curriculum stems from the Latin word for race course, referring to the course of deeds and experiences through which children grow to become mature adults. A curriculum is prescriptive, and is based on a more general syllabus which merely specifies what topics must be understood and to what level to achieve a particular grade or standard. An academic discipline is a branch of knowledge which is formally taught, either at the university–or via some other such method. Each discipline usually has several sub-disciplines or branches, and distinguishing lines are often both arbitrary and ambiguous. Examples of broad areas of academic disciplines include the natural sciences, mathematics, computer science, social sciences, humanities and applied sciences. Educational institutions may incorporate fine arts as part of K-12 grade curricula or within majors at colleges and universities as electives. The various types of fine arts are music, dance, and theater. An academic discipline is a branch of knowledge and it should not to be confused with school discipline. Individuals associated with academic disciplines are commonly referred to as experts or specialists. Others, who may have studied liberal arts or systems theory rather than concentrating in a specific academic discipline are classified as generalists. While academic disciplines in and of themselves are more or less focused practices, scholarly approaches such as multidisciplinarity, interdisciplinarity, transdisciplinarity, and crossdisciplinarity, integrate aspects from multiple academic disciplines, therefore addressing any problems that may arise from narrow concentration within specialized fields of study. For example, professionals may encounter trouble communicating across academic disciplines because of differences in language and/or specified concepts.

\_

Multidisciplinary:

Multidisciplinary’ knowledge is associated with more than one existing academic discipline or profession. A multidisciplinary community or project is made up of people from different academic disciplines and professions. These people are engaged in working together as equal stakeholders in addressing a common challenge. A multidisciplinary person is one with degrees from two or more academic disciplines.

\_

Interdisciplinary:

Interdisciplinary knowledge is the extent of knowledge that exists between or beyond existing academic disciplines or professions. The new knowledge may be claimed by members of none, one, both, or an emerging new academic discipline or profession. An interdisciplinary community, or project, is made up of people from multiple disciplines and professions who are engaged in creating and applying new knowledge as they work together as equal stakeholders in addressing a common challenge. Interdisciplinary approach is a technique or tool that establishes reciprocal relationship for better understanding of the subject. No knowledge is permanent unless we correlate one subject with the other. Knowledge is an indivisible whole and cannot be divided. There is a definite relationship between an engineer and a cotton producer because it is a joint venture of the two that a cloth is made. Therefore education must be correlated with other subjects. This co-relation between education and other subjects can go hand in hand only if activities of one influence the activities of the other. Correlation between subjects or inter-discipline is essential because it: –

1. Makes knowledge stable.

2. Enables to acquire knowledge in a short period.

3. Develops interest in the reader.

4. Lightens the burden of curriculum.

5. Makes knowledge broad based.

6. Develops various human and social activities such as cooperation generosity, harmony etc.

7. Maintains correlation with life.

\_

Interdisciplinary Teaching increases Student Learning:

Engaging students and helping them to develop knowledge, insights, problem solving skills, self-confidence, self-efficacy, and a passion for learning are common goals that educators bring to the classroom, and interdisciplinary instruction and exploration promotes realization of these objectives. Repko (2009) asserts that interdisciplinary instruction fosters advances in cognitive ability and other educational researchers (Kavaloski 1979, Newell 1990, Field et al. 1994, Vess 2009) have identified a number of distinct educational benefits of interdisciplinary learning including gains in the ability to:

•Recognize bias

•Think critically

•Tolerate ambiguity

•Acknowledge and appreciate ethical concerns

\_

Significant Learning (Fink, 2003) takes place when meaningful and lasting classroom experiences occur. According to Fink when teachers impart students with a range of skills, and insights about the educational process that students will see as meaningful and salient to them they promote student engagement in the learning process and greater learning occurs. Fink identifies 6 elements of the educational process that lead to significant learning and each of these is a common feature of interdisciplinary forms of instruction.

•Foundational Knowledge – acquiring information and understanding ideas

•Application – acquiring an understanding of how and when to use skills

•Integration – the capacity to connect ideas

•Human Dimension – recognition of the social and personal implications of issues

•Caring – acknowledgment of the role of feelings, interests, and values

•Learning How-to-Learn – obtaining insights into the process of learning

Interdisciplinary instruction fosters the acquisition of foundational knowledge, promotes integration of ideas from multiple disciplines and provides insight on how to apply knowledge all of which advance a student’s understanding of how to learn. Moreover, students are encouraged to account for the contribution of disciplines that highlight the roles of caring and social interaction when analyzing problems. Thus, the very structure of interdisciplinary learning is consistent with the core features of significant learning, so students are expected to find interdisciplinary education engaging and thus an effective way to advance their understanding of topics under investigation.

\_\_\_\_\_\_\_\_

Bloom’s taxonomy of educational objectives:

Bloom’s taxonomy is a set of three hierarchical models used to classify educational learning objectives into levels of complexity and mastery. The three lists cover the learning objectives in cognitive (knowledge-based), affective (emotive-based) and sensory/psychomotor (skill-based) domains. The cognitive domain list has been the primary focus of most traditional education and is frequently used to structure curriculum learning objectives, assessments and activities. There are knowledge-based goals, skills-based goals, and affective goals (affective: values, attitudes, and interests); accordingly, there is a taxonomy for each. Within each taxonomy, levels of expertise are listed in order of increasing complexity. Measurable student outcomes that require the higher levels of expertise will require more sophisticated classroom assessment techniques. Bloom’s Taxonomy uses a multi-tiered scale to express the level of expertise required to achieve each measurable student outcome. Organizing measurable student outcomes in this way will allow us to select appropriate classroom assessment techniques for the course.

\_

The Cognitive Domain (Knowledge-Based):

Bloom’s Taxonomy of Educational Objectives for Knowledge-Based Goals

Level of Expertise Description of Level Example of Measurable

Student Outcome

1. Knowledge Recall, or recognition of terms, ideas, procedure, theories, etc. When is the first day of Spring?

2. Comprehension Translate, interpret, extrapolate, but not see full implications or transfer to other situations, closer to literal translation. What does the summer solstice represent?

3. Application Apply abstractions, general principles, or methods to specific concrete situations. What would Earth’s seasons be like if its orbit was perfectly circular?

4. Analysis Separation of a complex idea into its constituent parts and an understanding of organization and relationship between the parts. Includes realizing the distinction between hypothesis and fact as well as between relevant and extraneous variables. Why are seasons reversed in the southern hemisphere?

5. Synthesis Creative, mental construction of ideas and concepts from multiple sources to form complex ideas into a new, integrated, and meaningful pattern subject to given constraints. If the longest day of the year is in June, why is the northern hemisphere hottest in August?

6. Evaluation To make a judgment of ideas or methods using external evidence or self-selected criteria substantiated by observations or informed rationalizations. What would be the important variables for predicting seasons on a newly discovered planet?

\_

Cognitive domain pyramid:

\_

\_

The Affective Domain (Emotive-based):

Bloom’s Taxonomy of Educational Objectives for Affective Goals

Level of expertise Description of level Example of Measurable Student Outcome

Receiving Demonstrates a willingness to participate in the activity When I’m in class I am attentive to the instructor, take notes, etc. I do not read the newspaper instead.

Responding Shows interest in the objects, phenomena, or activity by seeking it out or pursuing it for pleasure I complete my homework and participate in class discussions.

Valuing Internalizes an appreciation for (values) the objectives, phenomena, or activity I seek out information in popular media related to my class.

Organization Begins to compare different values, and resolves conflicts between them to form an internally consistent system of values Some of the ideas I’ve learned in my class differ from my previous beliefs. How do I resolve this?

Characterization by a Value or Value Complex Adopts a long-term value system that is “pervasive, consistent, and predictable” I’ve decided to take my family on a vacation to visit some of the places I learned about in my class

\_

\_

The Psychomotor Domain (skill-Based):

Bloom’s Taxonomy of Educational Objectives for Skills-Based Goals

Level of Expertise Description of Level Example of Measurable

Student Outcome

Perception Uses sensory cues to guide actions Some of the colored samples you see will need dilution before you take their spectra. Using only observation, how will you decide which solutions might need to be diluted?

Set Demonstrates a readiness to take action to perform the task or objective Describe how you would go about taking the absorbance spectra of a sample of pigments?

Guided Response Knows steps required to complete the task or objective Determine the density of a group of sample metals with regular and irregular shapes.

Mechanism Performs task or objective in a somewhat confident, proficient, and habitual manner Using the procedure described below, determine the quantity of copper in your unknown ore. Report its mean value and standard deviation.

Complex Overt Response Performs task or objective in a confident, proficient, and habitual manner Use titration to determine the Ka for an unknown weak acid.

Adaptation Performs task or objective as above, but can also modify actions to account for new or problematic situations You are performing titrations on a series of unknown acids and find a variety of problems with the resulting curves, e.g., only 3.0 ml of base is required for one acid while 75.0 ml is required in another. What can you do to get valid data for all the unknown acids?

Organization Creates new tasks or objectives incorporating learned ones Recall your plating and etching experiences with an aluminum substrate. Choose a different metal substrate and design a process to plate, mask, and etch so that a pattern of 4 different metals is created.

\_

To determine the level of expertise required for each measurable student outcome, first decide which of these three broad categories (knowledge-based, skills-based, and affective) the corresponding course goal belongs to. Then, using the appropriate Bloom’s Taxonomy, look over the descriptions of the various levels of expertise. Determine which description most closely matches that measurable student outcome. As can be seen from the examples given in the three Tables, there are different ways of representing measurable student outcomes. Bloom’s Taxonomy is a convenient way to describe the degree to which we want our students to understand and use concepts, to demonstrate particular skills, and to have their values, attitudes, and interests affected. It is critical that we determine the levels of student expertise that we are expecting our students to achieve because this will determine which classroom assessment techniques are most appropriate for the course. Though the most common form of classroom assessment used in introductory college courses–multiple choice tests–might be quite adequate for assessing knowledge and comprehension, this type of assessment often falls short when we want to assess our students’ knowledge at the higher levels of synthesis and evaluation. Multiple-choice tests also rarely provide information about achievement of skills-based goals. Similarly, traditional course evaluations, a technique commonly used for affective assessment, do not generally provide useful information about changes in student values, attitudes, and interests. Thus, commonly used assessment techniques, while perhaps providing a means for assigning grades, often do not provide us (or our students) with useful feedback for determining whether students are attaining our course goals. Usually, this is due to a combination of not having formalized goals to begin with, not having translated those goals into outcomes that are measurable, and not using assessment techniques capable of measuring expected student outcomes given the levels of expertise required to achieve them. Bloom’s taxonomy serves as the backbone of many teaching philosophies, in particular those that lean more towards skills rather than content. These educators would view content as a vessel for teaching skills. The emphasis on higher-order thinking inherent in such philosophies is based on the top levels of the taxonomy including analysis, evaluation, synthesis and creation. Bloom’s taxonomy can be used as a teaching tool to help balance assessment and evaluative questions in class, assignments and texts to ensure all orders of thinking are exercised in student’s learning.

\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_

Types of education:

The figure above sums the distinctions between formal, informal, and non-formal. These concepts were first developed in the 1950s by people working in the area of international development.

• Formal learning refers to hierarchically structured school systems; it runs from primary school through to university and organized school-like programs created on the job for technical and professional training.

• Informal learning describes a lifelong process through which learners acquire attitudes, values, skills and knowledge from daily experience. It is worth pointing out that learning informally can be very useful for some individuals. Introverted people, for example, might feel more comfortable in an informal context and, consequently, learn more than in a formal context.

• Intentional learning is the process whereby an individual aims at learning something and goes about achieving that objective in any way necessary.

• Accidental learning happens when an individual learns something by chance, without having planned or expected it.

• Non-formal learning includes any kind of organized educational activity outside the formal system whether operating separately or as an important feature of some broader activity intended to serve identifiable learning objectives.

\_

Contested definitions:

“It is difficult to make a clear distinction between formal and informal learning as there is often a crossover between the two.” (McGivney, 1999). Similarly, Hodkinson et al. (2003), conclude after a significant literature analysis on the topics of formal, informal, and non-formal learning, that the terms informal and non-formal appeared interchangeable, each being primarily defined in opposition to the dominant formal education system, and the largely individualist and acquisitional conceptualisations of learning developed in relation to such educational contexts. Moreover, he states that “It is important not to see informal and formal attributes as somehow separate, waiting to be integrated. This is the dominant view in the literature, and it is mistaken. Thus, the challenge is not to, somehow, combine informal and formal learning, for informal and formal attributes are present and inter-related, whether we will it so or not. The challenge is to recognise and identify them, and understand the implications. For this reason, the concept of non-formal learning, at least when seen as a middle state between formal and informal, is redundant.”

\_

Eraut’s classification of learning into formal and non-formal:

This removes informal learning from the equation and states all learning outside of formal learning is non-formal. Eraut equates informal with connotations of dress, language or behaviour that have no relation to learning. Eraut defines formal learning as taking place within a learning framework; within a classroom or learning institution, with a designated teacher or trainer; the award of a qualification or credit; the external specification of outcomes. Any learning that occurs outside of these parameters is non-formal.

\_

EU’s definition (EC 2001):

– Formal learning: learning typically provided by an education or training institution, structured (in terms of objectives, learning time or learning support) and leading to certification. Formal learning is intentional from the learners’ perspective

– Non-formal learning: learning that is not provided by an education or training institution and typically does not lead to certification. It is, however, structured (in terms of learning objectives, learning time or learning support). Non-formal learning is intentional from the learner’s perspective.

– Informal learning: learning resulting from daily life activities related to work, family or leisure. It is not structured (in terms of learning objectives, learning time or learning support) and typically does not lead to certification. Informal learning may be intentional but in most cases it is non-intentional (or incidental/ random).

\_

\_

While there is little doubt about the definition of formal education, non-formal education is a much broader and thus less clearly defined concept. Furthermore, the definition of non-formal education may vary from country to country. In many countries, it is understood that formal education takes place in schools, training institutions and at colleges and universities. Also, it has clearly defined curricula and rules for certification. Non-formal education, on the other hand, takes place mostly outside formal educational systems and is voluntary. It covers a wide variety of learning fields, like youth work, youth clubs, sport associations, voluntary service, training and many other activities that organise learning experiences. It has less clearly framed curricula and much less “certification power”, which gives it a weaker social and financial position. Also, its degree of professionalisation is lower and less strictly defined in comparison with formal education. Formal education is compulsory for the majority of students and must rely on extrinsic learning motivation; non-formal education has the advantage of being voluntary and can in principle count on the intrinsic motivation of its participants. In some countries, it is even seen as a learning process with no overt syllabus, no teacher and no examination or test at all. A multitude of reforms are going on in formal education to incorporate elements of nonformal education, such as individualised curricular approaches, student participation bodies, self-regulated learning, allowing students to choose subjects according to their inclination as well as including information technology as a learning strategy. Also, in many European countries, school reforms include an enlargement of the autonomy of the school. Such reforms testify to the awareness of formal education of the need to adapt to societal changes. The question remains, however, of whether it is able solve the paradox of coercive learning, on the one hand, and intrinsic motivation, on the other hand; in knowledge-based societies, intrinsic motivation is an absolute necessity because the learner must acquire a learning habitus which motivates her or him for lifelong learning. Formal education cannot guarantee a lifelong and well-paid job as it could in the past, although there is still in most European countries – albeit not in all – a strong correlation between educational level and chances of finding employment. The “normal work biography” is not a self-evident result of school learning anymore. That weakens formal education. There are many young people especially in lower educational tracks who want “to do something” and by that they do not mean learning at school. They feel that what they learn in school will not necessarily – or not at all – help them find work, so why bother? A growth in private schools and universities can be observed which serve the needs and wishes of privileged students (and their parents), while state education remains indispensable for the majority of the less-privileged. The potentially widening gap between private schools and institutions for well-to-do students and state-financed schools for the rest forms a threat to formal as well as non-formal education. The “community school” combines formal education with neighbourhood-based, non-formal activities not so much for the privileged as for underprivileged students. Finally, the question about the relationship between formal and non-formal education is highly dependent on national context. Traditions in the field of non-formal education are strong in the Scandinavian countries and Germany, but are weak in southern Europe and were absent in communist countries except for state youth organisations. So there is no one single answer and analysis to the problem, but each country must research the question in accordance with its own traditions and needs.

\_

Formal education is recognized in most countries as an important mechanism of socialization, cultural identity, social control, labour force production, social mobility, political legitimation and stimulation of social change (Thomas, 1983; Fagerlind and Saha, 1989). In the white western paradigm of education, formal education is an institutional matter. State sanctioned agencies such as the school, college, university and so on are viewed both as the normative exemplar of education, and the only bona fide value structures within which meaningful teaching, learning and education is perceived to occur. There is a prevailing, often uncontested belief within this tradition, that mainstream schools are universally functional and singular institutions which exist to fulfil the needs of individuals and social collectivities. This pervasive paradigm of education regards schools as the essential institutionalized cultural settings in which formal learning can take place and as the only socially valid settings in which learners can get formally educated. The process of institutionalization in schooling within this Eurocentric paradigm of education mirrors the beliefs, values, traditions, practices and normative expectations of those comprising the culture of domination. Learning which occurs outside of mainstream organizations, agencies or communities as a result is judged by the culture of domination; hence, invalid for certification, professional recognition or indexes of recognized (legitimated) knowledge; to be informal; a mode of education associated with informal teaching, informal knowledge, informal learning, informal education, and the unschooled. Knowledge is, hence, commodified, and in the case of degrees, professional offerings, certification and other academic recognitions, which often literally may be exchanged for currency in the form of jobs or licences, includes/excludes who may engage in formal practice. In this paradigmatic model, the ideological emphasis is always on the individual level of attainment; yet, paradoxically, it is in the social institutionalization and regulations, and other forming of time, space and quality of valued knowledge that this western model has a rigid equation and lockstep relation between valid knowledge and formal education with its intended trappings of certification, streaming, segmentation by particular scholarly fields, and so on. One becomes an “expert” within — and generally only within — the compartmentalized parameters drawn by this model. Knowledge in this way is ordinated, sorted into hierarchies of sacred and profane; sanctioned and unsanctioned; knowledge versus understandings. Lost in the valorisation of this compartimentalization of knowledge are the histories, biases, beliefs and collectively shared knowledge that organizationally link the individual and group as social extensions of one another. A particular history linked to a unique zeitgeist (world view), and way of processing the world. Western practice of the construction of formal knowledge, of course, was (and is) always riddled with such realities: implied bifurcations such as Judeo-Christian — other as an organization of cosmologies and theology; the primacy of logo — deductive reasoning and so on. Max Weber (1947) and other social scientists often implicitly acknowledge this in dichotomies such as subject-object; verstehen (understanding) versus scientific fact. But, these histories and particularities were relegated as interesting, but beyond the scientific pale. Unlike facts, such understandings were viewed as an embarrassment as to how knowledge was constructed. Yet, it is the sharing, processing, and valoration of such processes that First Nations and Indigenous knowledge encapsulates itself. Elders are valued, at least in part, because they are the carriers and emblems of this communally generated and mediated knowledge. In the western paradigm, such relations and processes of knowledge transmission is “informal”. Yet, these same processes are at the heart and soul of what is “formal” to Indigenous knowledge. Thinking and normative practices in white western institutions, by contrast, structure dichotomization between formal and informal learning. This is not happenstance; to the contrary, they have social intent. Combined, they comprise a dynamic complexity which results in boundary maintenance of unequal relations of power in education and domination, control, marginalization and exploitation of minority groups in society. Schools are sites for reproducing societal inequalities. The dichotomization of formal and informal education can be perceived as a dichotomy of social relations pertaining specifically to the Aboriginal peoples. Eurocentricity has devalued and negated the saliency of non-western forms of knowledge and their relevance to education in North America (Dei, 1996). Stated differently and more succinctly, the dichotomy in formal and informal education is also a dichotomy in social power relations. Both exist as dichotomies of Aboriginal and white western world views; dichotomies which are the result of the hegemonic forces of Eurocentricity.

\_

The Continuum of Formal and Informal Learning:

Formal and informal learning should not be thought of as completely distinct entities, but rather as being part of a continuum: That is, while at times you be able to identify an episode of learning as being either formal or informal, at other times they will blend together. For example, After Action Reviews provide a formal learning environment, but the learning tends to be informal in that the participants choose the topics to be discussed. While it might seem obvious to most readers that both formal and informal learning include both incidental and intentional learning, it might not be as obvious that formal learning often includes episodes of informal learning and vice versa. A two-year study calculated that each hour of formal learning spills over to four-hours of informal learning or a 4:1 ratio (Cofer, 2000). Bell (1977) used the metaphor of brick and mortar to describe the relationship of formal and informal learning. Formal learning acts as bricks fused into the emerging bridge of personal growth. Informal learning acts as the mortar, facilitating the acceptance and development of the formal learning. He noted that informal learning should not replace formal learning activities, as it is this synergy that produces effective growth. And of course the opposite occurs in that episodes of informal learning often lead to formal learning. In addition, some learning episodes that are strictly informal may be too narrowly based in that the learner only learns part of a task or superficial skills that may not be transferable to the job (Bell, Dale 1999).

\_

Continuum of formal, non-formal and informal learning:

\_\_

\_\_

Difference between three types of education: Formal, Informal and Non-Formal:

\_\_

Formal Education:

Formal education is consciously and deliberately pre-planned, organized and given for the modification of behavior with a particular end in view. Formal education is undertaken in institutions, specifically established and maintained for the purpose such as schools and colleges. It is limited to a specific period and it has well-defined curriculum. It is given by qualified and trained teachers, Formal education observes strict discipline. Formal education can be primary, middle, secondary, higher secondary level in the school and undergraduate, graduate and post graduate level in the colleges and university which can be in Art, Science, Commerce, Technical and Professional area. With growth of civilization and with the advances in the field of science and technology, the accumulated fund or knowledge and skills has become more and more complex and with it the need for formal education has also become more pressing and widespread..

\_

Formal Education is:

1. Institutional activity.

2. Chronologically graded hierarchically structured.

3. Uniform.

4. Subject oriented.

5. Full time.

6. Leads to certificates, diplomas, degrees

\_

Informal Education:

Informal education is not pre planned. It is quite incidental. It is type of education which the child gets while moving and living in the community with other persons; he/she picks up the way and habits of the adult members of his community and tries to adopt them. Such an education is not imparted by any organized agency; it is casual and gained through daily experiences and activities. Thus education starts from the very birth of a child and continues till death. Informal Education is a general term for education outside of a standard school setting. Informal Education is the wise, respectful and spontaneous process of cultivating learning. It works through conversation, and the exploration and enlargement of experience. It can refer to various forms of alternative education, such as:

•Unschooling or homeschooling

•Autodidacticism (Self-teaching)

•Youth work

\_

What we are talking about as ‘informal education’ may well be described in Scotland as community education or community learning, in Germany as social pedagogy, and in France as animation. In daily life we all act as educators from time to time. But there is also a need for specialists – educators who are skilled in, and committed to, working with people in everyday situations so that life can be more fulfilling and all can share in its fruits. Informal Educators work in many different kinds of settings with individuals and groups who choose to engage with them. The mass media (including television, video games, magazines, etc.), museums, libraries, zoos, after-school groups and other community-based organizations and cultural institutions offer forms of informal education.

\_

Informal learning is one of three forms of learning defined by the Organisation for Economic Co-operation and Development (OECD). Informal learning occurs in a variety of places, such as at home, work, and through daily interactions and shared relationships among members of society. For many learners this includes language acquisition, cultural norms and manners. Informal learning for young people is an on-going process that also occurs in a variety of places, such as out of school time, in youth programs at community centers and media labs. Informal learning usually takes place outside educational establishments, does not follow a specified curriculum and may originate accidentally, sporadically, in association with certain occasions, from changing practical requirements. It is not necessarily planned to be pedagogically conscious, systematic and according to subjects, but rather unconsciously incidental, holistically problem-related, and related to situation management and fitness for life. It is experienced directly in its “natural” function of everyday life and is often spontaneous.

\_

Hawkings (2004) states that it is far too simplistic to assume that learning is either formal or informal. At the very least, both learner affiliations and teaching/learning activities may each be divided into formal and informal, providing a two-by-two matrix one:

Activity

Affiliations formal informal

formal Lectures for groups of students Free-choice exploration of exhibits

informal Adult education courses Interactions with gallery characters

\_

Informal learning can be characterized as the following:

•It usually takes place outside educational establishments;

•It does not follow a specified curriculum and is not often professionally organized but rather originates accidentally, sporadically, in association with certain occasions, from changing practical requirements;

•It is not necessarily planned pedagogically, systematically according to fixed subjects, test and qualification-oriented, but rather, either unconsciously incidental or consciously intended intuition, holistically problem-related, and related to actual situations and fitness for life;

•It is experienced directly in its “natural” function of everyday life.

•It is often spontaneous and creative.

•It is a key component to an alternative learning system coined, Learning by Observing and Pitching-In (LOPI), which is highly used by the indigenous of the Americas, but not by all.

\_

Essential to a child’s early development:

Learning your mother tongue is an excellent example of informal learning. Imagine if a child were not exposed to any language for the first 5 years. How difficult would that child’s development become? Everything a young child learns at home is informal learning, from how to brush their teeth to how to say the alphabet to good manners. Without informal learning, we would never be able to cope in a formal learning environment.

\_

Essential to an adult’s lifelong learning:

Informal learning is a lifelong process. It does not end when a child enters school and the formal system “takes over”. On the contrary, children continue to learn at home. As we get older, we learn from our friends. As we enter the workforce, we learn from our co-workers. Into retirement, we still learn from friends and also from those younger than us. An adult learning to read and write from a volunteer literacy tutor is one example. A retired office worker learning from her grandson how to use an iPad is another example. Informal learning is what keeps us vibrant, mentally active and interested in the world around us, as well as our own development. Just because informal learning cannot be quantified easily does not mean that it is not worthwhile – or even essential to our development and growth as human beings.

\_

Self-directed learning:

Autodidacticism (also autodidactism) is a contemplative, absorbing process, of “learning on your own” or “by yourself”, or as a self-teacher. Some autodidacts spend a great deal of time reviewing the resources of libraries and educational websites. One may become an autodidact at nearly any point in one’s life. While some may have been informed in a conventional manner in a particular field, they may choose to inform themselves in other, often unrelated areas. Notable autodidacts include Abraham Lincoln (U.S. president), Srinivasa Ramanujan (mathematician), Michael Faraday (chemist and physicist), Charles Darwin (naturalist), Thomas Alva Edison (inventor), Tadao Ando (architect), George Bernard Shaw (playwright), Frank Zappa (composer, recording engineer, film director), and Leonardo da Vinci (engineer, scientist, mathematician).

\_

Research and data:

Merriam and others (2007) state: “studies of informal learning, especially those asking about adults’ self-directed learning projects, reveal that upwards of 90 percent of adults are engaged in hundreds of hours of informal learning. It has also been estimated that the great majority (upwards of 70 percent) of learning in the workplace is informal (Kim, Collins, Hagedorn, Williamson, & Chapman, 2004), although billions of dollars each year are spent by business and industry on formal training programs” (p. 35–36). Both formal and informal learning are considered integral processes for Virtual Human Resource Development (Bennett, 2009), with informal learning the stronger form.

\_\_

Non Formal Education:

A new concept has developed recently after the publication of report of the international commission on the development of education, learning by the non-formal education. The commission feels that in-spite of vast financial resources being spent on education, vast majority of people do not get the desired education. They may find it difficult, due to their preoccupation in earning, to join formal education, to join formal educational institutions during specific working hours. The commission therefore suggests that alternative arrangements should be made for those who cannot attend formal institutions. For them we may have postal courses or correspondence courses. People desirous of learning should have an opportunity of studying privately in their leisure hours getting guidance through postal tuition, contact programs, vacation programs, summer institutes, broadcasting programs television programs, satellite instructional programs, teaching machines, programmed lessons and like. Open universities could be started with country wide enrolment of working class, who can study at leisure and appear at examination of the university. It falls within the formal and informal types of education. It is a flexible system. The characteristics are –

•It is intentional, incidental and given outside the formal system, i.e., school.

•It is consciously and deliberately planned, organized and systematically implemented.

•It is an open system of education without rigid rules, regulations and fixed stages or time schedule.

•It is a life-long process, integrated with life and work. It is life oriented and environment based.

•It is intended for all ages.

•It is programmed to serve the needs of identified groups of different categories If and when they need.

•It necessitates flexibility in designing the curriculum and the scheme of evaluation.

•Social or adult education, distance education are the examples of non-formal education.

\_

Fordham (1993) suggests that in the 1970s, four characteristics came be associated with non-formal education:

•Relevance to the needs of disadvantaged groups.

•Concern with specific categories of person.

•A focus on clearly defined purposes.

•Flexibility in organization and methods.

\_

The disadvantaged:

‘Disadvantaged’ means all those social groups who are either under-represented in formal education or who are considered failures within it. Such educational disadvantaged also correlates closely with other kinds of social deprivation, including poverty, unemployment and low social status.

\_

Goals/objectives of non-formal education:

1. Provides functional literacy and continuing education for adults and youths who have not had the advantage of formal education or who did not complete their primary education.

2. Provide functional and remedial education for the young people who did not complete their secondary education.

3. Provide education to different categories of graduates to improve the basic knowledge and skills.

4. Provide in-service, on-the-job, vocational and professional training to different categories of workers and professionals to improve their skills.

5. Give adult citizens of different parts of the country necessary aesthetic, cultural and civic education for public enlightenment.

\_\_\_\_

Difference between Formal Education and Non-Formal Education:

Formal Education Non Formal Education

Target Group Mainly young, Universal, Compulsory, Selective Mainly adults, those interested, voluntary and open

Time Scale Full time and Primary activity Part time and Secondary activity of participants

Relevance Separate form life, In special institution, In sole purpose buildings Integrated with life, In the community, In all kinds of settings

Programme Run by professionals, Excludes large parts of life It is participatory, Includes large parts of life.

Curriculum One kind of education for all Education to meet learner

Methods Teacher centered, Mainly written Learner centered, Much is Oral

Objectives Conformist Promotes

Independence Set by teachers, Competitive Set by learners and Controlled by Learners

Orientation Future Present

Relationship Hierarchical Egalitarian believing in Equal Right

Validation Terminal at each stage, Validated by education Professional Continuing validated by learners

\_

Importance of non-formal education:

Education plays an important role in development. Out of school programmes are important to provide adaptable learning opportunities and new skills and knowledge to a large percentage of people who are beyond the reach of formal education. Non formal education began to gain popularity in the late 1960s and early 1970s. Today non-formal education is seen as a concept of recurrent and lifelong learning. Non formal education is popular among the adults specially the women as it increases women’s participation in both private and public activities, i.e. in house hold decision making and as active citizens in the community affairs and national development. These literacy programmes have a dramatic impact on women’s self-esteem because they unleash their potential in economic, social, cultural and political spheres. According to UNESCO (2010), non-formal education helps to ensures equal access to education, eradicate illiteracy among women and improve women’s access to vocational training, science, technology and continuing education. It also encourages the development of non-discriminatory education and training. The effectiveness of such literacy and non-formal education programmes are bolstered by family, community and parental involvement.

\_\_\_\_\_\_\_\_

Out-of-school learning especially school trips as overlap between formal, non-formal and informal education:

Learning outside the classroom is defined as “the use of places other than the classroom for teaching and learning”. Some researchers prefer to call it outdoor classroom, which means the “spaces where students can experience familiar and unfamiliar phenomena beyond the normal confines of the classroom”. These outdoor classrooms can be everywhere, such as school playground, local community, parks, museums, science centres, and field study centres. In short, learning outside the classroom is the learning activity that takes place in anywhere only except the school classroom. Teachers highlight the value of learning outdoors as it provides first-hand experiences, stimulates interest and motivation in science, gives meaning to learning and its interrelationships, observation and perception skills, and personal/social development. Consequently these external site visits may provide students a worthwhile and beneficial complement to their classroom studies. The benefit of out-of-school learning for children is obvious as recent research proved that children who are engaged in learning outside the classroom usually perform better in school subjects, have more confidence and self-esteem, and show more greater social competence and environmental responsibility (Malone, 2008).

\_

The literature often conceptualises formal and informal learning with only one criterion—the physical setting. Formal learning is described as in-school learning in which participation is mandatory, and the learning experiences are more structured and de-contextualised. Learning in this setting is directed by national curriculum, teacher-led and usually assessed as follow-up. On the other hand, informal is portrayed as voluntary participation in out-of-school settings, where learning is learner directed, contextualised and normally without evaluation and assessment. Although many in-school experiences are mandatory, teacher-centred and involve individual work, this is not the case for all in-school learning. For instance, in a science classroom, a teacher may encourage students to construct the scientific concepts through argumentation or group work. On the other, not all out-of-school learning is as open-ended, free-choice and non-assessed. A school trip to botanic garden or science museum, for example, might be organised with the purpose to connect students’ school science knowledge with their real life experience. During the trip, students may be guided either by their teacher or education staff to conduct planned and structured activities, which may be designed under the guidance of national curriculum or an ongoing school subject. Learning is learning, and it is strongly influenced by setting, social interaction, and individual beliefs, knowledge, and attitudes, thus only by considering physical setting cannot achieve a clear definition of informal learning and it also blur our understanding about the learning outside the classroom. To obtain a better understanding of the characteristics of out-of-school learning, and school trip in particular, multiple factors such as motivation, interest, social context and assessment should be taken into account, rather than only in viewing of physical difference. So, the concept of non-formal learning, which posits between the extreme formal and informal learning, may help us to understand out-of-school learning in depth. Non-formal learning refers to the educational activity that ‘occurs in a planned but adaptable manner in institutions, organisations, and situations beyond the spheres of formal or informal education. It shares the characteristic of being mediated with formal education, but the motivation for learning may be wholly intrinsic to the learner’.

\_

According to Eshach (2006), to situate out-of-school learning, especially the school trip, in formal and non-formal categories helps to achieve a clearer picture about the nature of out-of-school learning. Eshach (2006) highlighted nine characteristics of formal, non-formal and informal learning positioned as three poles in a typology with opposite characteristics as seen in the table below:

\_

Differences between Formal, Non-formal and Informal Learning (Eshach, 2006):

For example, during an educational visit in a botanic garden, students may have free-choice to engage themselves in observing and discovering the mystic aspect of the plant kingdom. Therefore the learning at this moment is informal in nature. In contrast, the visit may also involve teacher or botanic garden educator guided sessions, during which students have to take part in prearranged and structured activities. This demonstrates the non-formal perspective of a school trip. To base on these three overlapping lines of analysis, as Colley et al. (2002) concluded, “boundaries between formal, non-formal and informal learning can only be meaningfully drawn in relation to particular context, and for particular purposes”. In this regard, school trips can be considered as non-formal teaching in informal contexts.

\_\_\_\_\_\_\_

Approximation of the learning ratios: 70-20-10 vs. 3-33

The 70-20-10 process is a learning and development model developed by Michael Lombardo and Robert Eichinger (2000) that uses a three blend approach to provide a development platform for senior managers and leaders:

•About 70% of learning is by using challenging assignments and on-the-job experiences.

• About 20% of learning is developed through relationships, networks, and feedback.

•About 10% of the learning is delivered via formal training processes.

The reason the 70-20-10 model is not easily transferable to the typical learning and daily work flows that occur in organizations is because the ratio of informal to formal learning varies with context. The best researched numbers show an average of 70% informal learning and 30% formal learning. For example:

1. The largest and most comprehensive study is by the U.S. Bureau of Labor Statistics of the U.S. Department of Labor (1996). Their research found that an average of 30% of the learning needs come from formal learning, while informal learning averages about 70%, thus it differs greatly from the ratios that the 70-20-10 model prescribe.

2. These numbers are averages, thus the ratios depend greatly on context, such as the learners’ type of job, skill level, organization changes, etc. For example, Loewenstein and Spletzer (1998) who performed another comprehensive study for the U.S. Bureau of Labor Statistics of the U.S. Department of Labor discovered that learning varies from about 13% to 46% for formal learning and 9% to 96% for informal learning.

3. When one looks at the ratios that show lower levels for formal learning, there is no reliable research. For example, Raybould (2000) writes that, “many organizations report that 85-90% of a person’s job knowledge is learned on the job, and only 10-15% is learned in formal training events”. However, the author does not reference any research to back up his claims.

\_

3-33: A Better Model?

Dan Pontefract (2013) provides a closer approximation of the learning ratios: 3-33, which stands for 33% of the learning is formal, 33% is informal, and 33% is social. What is most interesting is that the research behind his model revealed that when the learners were asked to give the percentages on how they thought they learned, the numbers were very different than when the researchers actually discovered how the learners did indeed learn. Pontefract 3-33 approximation is a Pervasive Learning model – learning is a collaborative, continuous, connected, and community-based growth mind-set:

\_\_\_\_\_\_\_

\_\_\_\_\_\_\_

Special Education:

\_

Mentally challenged and handicapped students are educated through special learning methods, known as special education. For a student to be admitted into a special education school he is first evaluated on the various parameters of disabilities and accordingly, his eligibility is determined. The term `child with a disability’ means a child… with mental retardation, hearing impairments, speech or language impairments, visual impairments, serious emotional disturbance, orthopedic impairments, autism, traumatic brain injury, other health impairments, or specific learning disabilities… who… needs special education and related services.

\_

Various disabilities eligible for special education:

\_\_\_\_\_\_\_\_

Vocational education:

Vocational education is a form of education focused on direct and practical training for a specific trade or craft. Vocational education may come in the form of an apprenticeship or internship as well as institutions teaching courses such as carpentry, agriculture, engineering, medicine, architecture and the arts. I have already discussed vocational education at http://drrajivdesaimd.com/?p=2275 in article ‘CAREER GUIDANCE AND CAREER EDUCATION’.

\_

Industry-oriented education:

Industry oriented education is an approach to learning from an industry perspective. With traditional technical teaching methodologies in educational environments, the conventional pathway is to build the foundation learning through subject based teaching of maths, physics and science independently. Subjects based on the knowledge required for the discipline usually follow on from this. The problem with this traditional methodology of learning is that there is no close relationship with industry requirements.

\_\_\_\_\_\_

Alternative education:

Alternative education is education that diverges in some way from that offered by conventional schools. Examples may be found in publicly funded schools, private schools, and homeschooling curricula. The focus might be on alternative structures (e.g., open classrooms), alternative subject matter (e.g., religious instruction), or alternative relationships (e.g., more informal relations between students and teachers or between students of different ages). Each of these approaches aims to supply what is seen to be lacking in conventional education, whether moral or ethical principles or recognition of children’s individual learning styles and innate creativity. Alternative education is a blanket term encompassing many different pedagogical approaches differing from that of the mainstream pedagogy employed in a culture. Such alternatives may be found within state, charter, and independent schools as well as home-based learning environments. Many, but not all educational alternatives emphasize small class sizes, close relationships between students and teachers and a sense of community. The legal framework for such education varies by locality, and determines any obligation to conform with mainstream standard tests and grades. Alternative pedagogical approaches may include different structures, as in the open classroom, different teacher-student relationships, as in the Quaker and free schools, and/or differing curricula and teaching methods, as in the Waldorf and Montessori schools. Synonyms for “alternative” in this context include “non-traditional,” “non-conventional” and “non-standardized”. Alternative educators use terms such as “authentic”, “holistic” and “progressive”.

\_\_

Types of alternative Schools:

• Democratic and Free Schools

• Folk Education

• Friends (Quaker) Schools

• Homeschooling, unschooling, and deschooling

• Krishnamurti Schools

• Montessori Schools

• Open Schools (and Classrooms)

• Waldorf Schools (or Steiner Schools as they are called in Europe)

\_

Alternative education can:

•prepare for the transition from primary to secondary and from secondary to post-16 education, including Study Programme

•improve academic attainment, behaviour, self-confidence and self-esteem

•set clear goals and outcomes

•develop skills for entry into employment

•provide in-full or supplement your current PSHE (Personal, social, health and economic) programme, including drugs awareness, alcohol awareness, sexual health, gangs and crime, leadership, team building, problem solving and working with others

•make school participation inclusive.

\_

In addition, there are a number of trends in education-at-large that directly relate to approaches for learning and teaching which are used in both traditional and alternative settings. These trends relate most closely to the transactional and transformational orientations. Some of the core trends are described briefly below:

• Character education — attention to qualities of the students’ being and acting in society that often focus on more intrapersonal and interpersonal aspects of student development.

• Cooperative learning — working with students in groups so that the students learn more about working together rather than just independently.

• Developmental education — focus on a child’s growth across life stages, may include physical, intellectual, psychological, and/or spiritual development.

• Experiential learning — the heart of many alternative philosophies of education, this in its simplest form means merely learning by doing. It can be incorporated into any philosophical approach or hodgepodge of educational practices.

• Learning styles — refers to how each student often shows preferences for using various modes of learning such as learning best by reading, by hearing, or by moving their bodies. There are many ways to “cut the pie” for describing different learning styles.

• Multiple intelligences and emotional intelligence — two specific, well-articulated, and often-referenced bodies of educational research that involve the writings of theorists Howard Gardner, Daniel Goleman, and many others who have now begun applied research in these developmental fields.

• Natural learning rhythms — a more holistic approach to developmental education articulated especially well by Maria Montessori and more recently by EnCompass, through a series of programs for parents and educators.

• Whole language — a well-documented approach for helping students learn to read that involves learning in context (like we learn to talk), and not solely through techniques such as phonics, grammar, or written symbols alone.

\_

Holistic education:

Holistic education involves personalised learning in which the learner and the teacher are co-creators of the content of the learning process. Holistic education involves integration of the spiritual dimension of human nature. Holistic education is education for optimal human development. Holistic education is education for renewal of eroded human values which transcend economics and are necessary for responsible action.

\_\_\_\_\_\_

Indigenous education:

Indigenous education refers to the inclusion of indigenous knowledge, models, methods, and content within formal and non-formal educational systems. Often in a post-colonial context, the growing recognition and use of indigenous education methods can be a response to the erosion and loss of indigenous knowledge and language through the processes of colonialism. Furthermore, it can enable indigenous communities to reclaim and revalue their languages and cultures, and in so doing, improve the educational success of indigenous students. One of the similarities between indigenous education and the modern education is that they had the same purpose of preparing of the young generation into a useful adult life in household, village and tribe. However, indigenous education taught children their own indigenous culture based within their own society while modern education brought in their culture from another society.

\_\_\_\_\_\_

Religious Education:

The classical example of religious education system is Islamic education. Institutions have their own management system. They run on aid provided by government or other party. Pakistan Madrassa boards are established to regulate Madrassa activities. They provide free religious education with lodging and boarding.

\_\_\_\_\_\_\_

Sex education:

Note:

I have discussed sex education in detail at http://drrajivdesaimd.com/?p=344 on my website.

\_

Sex education is instruction on issues relating to human sexuality, including emotional relations and responsibilities, human sexual anatomy, sexual activity, sexual reproduction, reproductive health, reproductive rights, safe sex, birth control and sexual abstinence. Sex education that covers all of these aspects is known as “comprehensive sex education”. Common avenues for sex education are parents or caregivers, formal school programs, and public health campaigns. Traditionally, adolescents in many cultures were not given any information on sexual matters, with the discussion of these issues being considered taboo. Such instruction, as was given, was traditionally left to a child’s parents, and often this was put off until just before a child’s marriage. The progressive education movement of the late 19th century, however, led to the introduction of “social hygiene” in North American school curricula and the advent of school-based sex education. Despite early inroads of school-based sex education, most of the information on sexual matters in the mid-20th century was obtained informally from friends and the media, and much of this information was deficient or of dubious value, especially during the period following puberty, when curiosity about sexual matters was the most acute. This deficiency was heightened by the increasing incidence of teenage pregnancies, particularly in Western countries after the 1960s. As part of each country’s efforts to reduce such pregnancies, programs of sex education were introduced, initially over strong opposition from parent and religious groups. The outbreak of AIDS has given a new sense of urgency to sex education. In many African countries, where AIDS is at epidemic levels, sex education is seen by most scientists as a vital public health strategy. Some international organizations such as Planned Parenthood consider that broad sex education programs have global benefits, such as controlling the risk of overpopulation and the advancement of women’s rights. According to SIECUS, the Sexuality Information and Education Council of the United States, 93% of adults they surveyed support sexuality education in high school and 84% support it in junior high school. In fact, 88% of parents of junior high school students and 80% of parents of secondary school students believe that sex education in school makes it easier for them to talk to their adolescents about sex. Also, 92% of adolescents report that they want both to talk to their parents about sex and to have comprehensive in-school sex education. Furthermore, a study, conducted by Mathematica Policy Research on behalf of the U.S. Department of Health and Human Services, found that abstinence-only-until-marriage programs are ineffective.

\_

Sex Education in Schools:

Sex education is taught mainly in public schools on topics ranging from abstinence and reproduction to sexually orientation and sexually transmitted diseases. Sex education is primarily introduced in grades 7 through 12 although some schools have addressed sexuality topics as early as the fourth grade.

\_

Sex education curricula and programs should be reviewed carefully for the following important components:

• Acknowledging that sexuality is a component of each person’s personality, character, and life

• Containing age appropriate information, based on physical, emotional, and social developmental stages

• Containing information that is honest, medically accurate, and based upon verifiable scientific and behavioral theories

• Respecting of differences in family, religious, and social values

• Being non-judgmental and open to all questions and concerns related to sexuality

• Reflecting cultural, social, and ethnic diversity

• Encouraging children/youth to discuss sexuality issues with their parents and to ask them questions

• Providing parental review of all materials used in the classroom

• Avoiding shame, fear, or guilt

• Promoting gender equality

• Including skills for decision making and resisting pressure

• Acknowledging that sexuality and sexual decisions are influenced by family, media, peers, religion, and personal experiences

• Acknowledging both responsibility and pleasure in intimate sexual relationships

• Giving young people opportunities to role play and to practice effective communication

• Acknowledging the diversity of sexual orientation

• Acknowledging that sexual abuse, coercion, and incest occur and offering referrals for counselling and support for survivors

• Promoting responsibility, respect, and honesty in relationships

• Containing materials evaluated by respected researchers and published in credible sources

• Offering reference lists from scientific, professional, peer-reviewed sources rather than personal opinions, newspaper articles, sermons, speeches, or magazine articles.

\_

Of the states addressing sex education in schools, topics may include:

•HIV/AIDS STD-related information

•Abstinence

•Reproduction, including description of the male and female genitalia

•Contraception, including the instruction on the proper use of a condom and diaphragm

•Pregnancy and the financial responsibilities of raising a child

•Adoption

•Sexual orientation

Because the laws vary, it’s important to check the sex education laws of your particular state and/or school district.

\_

Comprehensive Sex Education:

“Comprehensive sex education,” is based on four premises:

1. Teenage sexual activity is inevitable.

2. Educators should be value-neutral regarding sex.

3. Schools should openly discuss sexual matters.

4. Sex education should teach students about contraception.

\_

Most of us limit the scope of sex education by taking it at its face value. It is not just about sex. It involves other delicate issues like sexual health, sexual reproduction, sexuality and others that parents often feel awkward to talk about with their children. Hence, it becomes the responsibility and the duty of schools to take up this topic, and inform and educate the students about it as much as they can. However, this is almost never taken in the right spirit by parents and students themselves. They begin deliberation on the pros and cons of sex education in schools, and form an attitude towards it based on what they think is right.

\_

Note:

•Sex education taught in one school is not the same as that taught in the other. The attitudes of parents, educators or religious leaders in different communities lead to variations in the subject matter being taught in different countries, states and even schools.

•While sex education usually takes place in single-sex classrooms, students still suffer from embarrassment or can get excited by the topic discussions. This can result in out-of-control classrooms with students taking to giggling and making inappropriate remarks.

•Often, sex education in schools is considered as a recreational course rather than a serious subject.

\_

Cons of sex education:

•From 1971 to 1981, government funding at all levels for contraceptive education increased by 4,000 percent in the U.S. During that time, teen pregnancies increased by 20 percent and teen abortions nearly doubled.

•A 1986 Johns Hopkins University study concluded that comprehensive sex education did not reduce teen pregnancies, a finding replicated by other studies.

•A 1986 Lou Harris Poll, commissioned by Planned Parenthood (a leading sponsor of comprehensive sex education), found that teens who took a comprehensive sex education course (including contraceptive education) were significantly more likely to initiate sexual intercourse than teens whose sex education courses did not discuss contraceptives.

\_

Neurobiological cons of sex education:

In the past decade our understanding of the teen brain and how it reasons and makes decisions during moments of high stimulation has grown tremendously. We didn’t know until recently that the brain area that is responsible for making rational, thought-out decisions, the area that considers the pros and cons and consequences of decisions [prefrontal cortex], is immature in teens. The circuits aren’t complete; the wiring is unfinished. Sex educators insist that, like adults, teens are capable of making responsible decisions; they just lack information about sexuality and access to contraceptives. So the way to fight sexually transmitted infections and teen pregnancies, these authorities argue, is to provide teens with information and contraceptives, and teach them skills like how to say “no” and how to put on a condom. But current neuropsychological research does not support this stance. We now know that teens’ poor decisions are likely due not to lack of information, but to lack of judgement. And there is only one thing that will bring that: time.

\_

Religious Beliefs and Sentiments:

Many groups of people believe that when it comes to sex education, the cons outweigh the pros, for one very simple reason. They believe, beyond a doubt, that their children should not be exposed to something as crude as sex, in their school days because their religion does not permit it. It goes against their religious beliefs and sentiments, and they do not accept it, on principle. It becomes very difficult to argue with people when they bring religion to the forefront. And so, many schools prefer to leave this sensitive issue untouched.

\_

Pros of sex education:

Evidence shows that a combination of comprehensive sex education and access to birth control appears to decrease the rates of unintended pregnancies among teenagers. A meta-analysis compared comprehensive sex education programs with abstinence-only programs found that abstinence-only programs did not reduce the likelihood of pregnancy, but rather may have increased it. Numerous studies show that curricula providing accurate information about condoms and contraception can lead to reductions in the risky behaviors reported by young people as well as reductions in unintended pregnancies and STIs. Programs that teach only abstinence have not been shown to be effective. A U.S. review concludes that “the overwhelming weight of evidence shows that sex education that discusses contraception does not increase sexual activity”. The 2007 study found that “No comprehensive program hastened the initiation of sex or increased the frequency of sex, results that many people fear.” Further, the report showed “Comprehensive programs worked for both genders, for all major ethnic groups, for sexually inexperienced and experienced teens, in different settings, and in different communities.” According to UNFPA, “A 2010 review found that ‘gender-focused’ curricula – meaning curricula that integrate gender equality into the learning material – were substantially more effective in reducing risky behaviors than programmes that did not consider gender.” Research has also shown that delay in sexual initiation, use of condoms and practice contraception has been a result of young people adopting egalitarian attitudes about gender roles. These individuals were also found to be less likely engaged in violent relationships and have a lower rate of STIs including HIV and unintended pregnancy. By emphasizing rights and gender issues, these programs help reduce gender-based violence and bullying, promote safe schools, empower young people to advocate for their own rights, and advance gender equality.

\_

Sex education: gender-segregated or co-education:

When boys and girls are in separate classes, they may feel more comfortable asking questions about gender specific topics, such as menstruation and nocturnal emissions. Instruction may be differentiated more easily to meet the unique educational needs and learning styles of boys and girls in gender-segregated classes. However, instructing boys and girls separately can perpetuate the aura of stigma and add to the mystery of the topic; also boys and girls miss the opportunity to practice communicating with each other about sensitive topics as they will need to if and when they develop intimate relationships in the future. In combined classes, boys and girls tend to behave in a more mature manner in order to impress each other. Keeping boys and girls together makes it easier and more efficient to schedule the instruction.

\_

Parents as advocates for Comprehensive Sex Education in Schools:

Parental support for school-based sex education is overwhelmingly positive. Over the past 20 years, in survey after survey, local, state or national, 80 to 85 percent of parents indicate they want their children to receive comprehensive, medically accurate, age-appropriate sex education. Parents see such courses and content as supplementing, not supplanting, their discussions at home. They say that their children need both to be taught about delaying the onset of intimate sexual relationships until they are mature and responsible and also given the information and skills they need to use condoms and contraception when they do choose to become sexually active. It’s not either/or, but both.

\_

LGBT (lesbian, gay, bisexual, and transgender) sex education:

One major source of controversy in the realm of sex education is whether LGBT sex education should be integrated into school curricula. LGBT sex education includes safe sex practices for lesbian, gay, bisexual, and transgender individuals and general instruction in topics related to homosexuality. Studies have shown that many schools do not offer such education today. Proponents of LGBT sex education argue that encompassing homosexuality into the curricula would provide LGBT students with the sexual health information they need, and help to ameliorate problems such as low self-esteem and depression that research has shown can be present in LGBT individuals. They also claim that it could reduce homophobic bullying. Opponents often argue that teaching LGBT sex education would be disrespectful to some religions and expose students to inappropriate topics. They say that including homosexuality in the curriculum would violate parents’ rights to control what their children are exposed to and that schools should not inflict a particular political view on students. Currently, many sex education curricula do not include LGBT topics, and research has reported that students often feel that they do not receive adequate instruction in LGBT sex topics.

\_\_\_\_\_

Health education:

Students are often taught the basics of personal health and hygiene in primary and secondary school as well as by their parents, but extra knowledge can benefit them. For example, teaching students about a proper diet and reinforcing healthy conceptions of body image can stave off childhood obesity and eating disorders. Because adolescence is one of the most impressionable times in a person’s life, health education during this time often is well-received. Other elements of health education include time and stress management, dealing with social relationships and peer pressure, and the necessity of regular sleep to retain information learned in school and elsewhere.

\_\_\_\_\_\_\_

Girl (women) education:

When you educate a man, you educate an individual and when you educate a woman, you educate an entire family. This declaration is multi-faceted—an educated woman has the self-confidence, skills as well as intelligence to understand the need to be a better daughter, sister, wife and mother and make a progressive family. Education is the only tool with which a girl or a woman can empower herself and eventually her family. A child born to a mother who can read is 50% more likely to live past age 5. Every additional year of maternal education reduces the child mortality rate by 2 percent. An educated woman is likely to marry at a later age and have fewer children. Cross-country studies show that an extra year of schooling for girls reduces fertility rates by 5 to 10 per cent. A 2000 study in Brazil found that literate women had an average of 2.5 children while illiterate women had an average of six children. Girls who receive an education are less likely to contact HIV & AIDS, and thus, less likely to pass it onto their children. Educated women (with greater knowledge of health care and fewer pregnancies) are less likely to die during pregnancy, childbirth, or during the postpartum period. Increased education of girls also leads to more female health care providers to assist with prenatal medical care, labor and delivery, delivery complications and emergencies, and follow-up care. An educated woman will also be more productive at work — and better paid. Indeed, the dividend for educational investment is often higher for women than men. Studies from a number of countries suggest that an extra year of schooling will increase a woman’s future earnings by about 15 per cent, compared with 11 per cent for a man. One additional school year can increase a woman’s earnings by up to 20%, according to World Bank studies, and Plan International has shown that some countries lose more than $1 billion a year by failing to educate girls at the same level as boys. Educated women are more likely to participate in political discussions, meetings, and decision-making, which in turn promotes a more representative, effective government. Educated girls and women are less likely to be victims of domestic and sexual violence or to tolerate it in their families. Educated women have a greater chance of escaping poverty, leading healthier and more productive lives, and raising the standard of living for their children, families, and communities. Over recent decades there has certainly been significant progress in girls’ education. Between 1970 and 1992, combined primary and secondary enrolment for girls in developing countries rose from 38 per cent to 68 per cent — with particularly high rates in East Asia (83 per cent) and Latin America (87 per cent). But there is still some way to go. In the least developed countries enrolment rates are only 47 per cent at the primary level and 12 per cent at the secondary level.

\_

Equal schooling for both boys and girls is the foundation for development. No other policy intervention is likely to have a more positive multiplier effect on progress across all the MDGs than the education of women and girls. Nevertheless, there are still more boys than girls attending school in many countries. Education is very important for every child whether boy or girl. It is sad that some communities still discriminate against the education of the girl child. Some 54 per cent of the world’s out-of-school children are girls. Twenty-eight countries have less than 90 girls in school per 100 boys. In many countries, girls are faced with barriers to education ranging from negative attitudes to the burden of household work and distance to school. Special efforts – from recruiting female teachers to supporting poor families to making schools more girl-friendly – are needed to redress the balance. Of the 759 million adults who cannot read or write, around two-thirds are women. This proportion has remained unchanged since 2000. Educated women are capable of bringing socio-economic changes. The constitution of almost all democratic countries, including India, guarantees equal rights to both men and women. Primary education is now a fundamental right. When a woman (or a girl) is ensured of her rights, the society at large is ensured of its sustainability. Realizing the importance of women education, the government and many non-government organizations took a lot of projects to spread women education. Literacy programs are being taken in favor of women.

\_

What would it take to improve girls’ access to education? Experience in scores of countries shows the importance, among other things, of:

•Parental and community involvement — Families and communities must be important partners with schools in developing curriculum and managing children’s education.

•Low-cost and flexible timetables — Basic education should be free or cost very little. Where possible, there should be stipends and scholarships to compensate families for the loss of girls’ household labour. Also, school hours should be flexible so children can help at home and still attend classes.

•Schools close to home, with women teachers — Many parents worry about girls travelling long distances on their own. Many parents also prefer to have daughters taught by women.

•Preparation for school — Girls do best when they receive early childhood care, which enhances their self-esteem and prepares them for school.

•Relevant curricula — Learning materials should be relevant to the girl’s background and be in the local language. They should also avoid reproducing gender stereotypes.

\_\_\_\_\_\_\_\_\_\_\_

Adult education:

In a 1970 report, the National Institute of Adult Education (England and Wales) defined adult education as “any kind of education for people who are old enough to work, vote, fight and marry and who have completed the cycle of continuous education, [if any] commenced in childhood.” Adult education comprehends such diverse modes as independent study consciously pursued with or without the aid of libraries; broadcast programs or correspondence courses; group discussion and other “mutual aid” learning in study circles, colloquia, seminars or workshops, and residential conferences or meetings; and full- or part-time study in classes or courses in which the lecturer, teacher, or tutor has a formal leading role.

\_

Forms of Adult Education:

Contemporary adult education can take many different forms. Colleges and universities have instituted evening programs, extension work, courses without credit, correspondence courses, distance learning programs (with courses transmitted to numerous locations), and online courses; community colleges have been especially active in this area. Organizations designed to relieve illiteracy are instrumental in adult education, as are the schools established to teach the English language and American customs to the foreign-born. Adult education is also sponsored by corporations, labor unions, and private institutes. The field now embraces such diverse areas as vocational education, high-school equivalency, parent education, adult basic education (including literacy training), physical and emotional development, practical arts, applied science, and recreation as well as the traditional academic, business, and professional subjects. Each year millions of Americans take such a course or program. At the local level, public schools have been active in furnishing facilities and assistance to private adult education groups in many communities. Community centers, political and economic action associations, and dramatic, musical, and artistic groups are regarded by many as adult education activities. Great Books groups (est. 1947), in which adults read and discuss a specified list of volumes, grew out of great books seminars at Chicago and Columbia universities and St. John’s College. In many places the local public library sponsors such groups.

\_

Focus on Individual or Society in adult education?

One of the core tensions of adult education (Merriam and Brockett 1997) is whether the primary focus of the field should be on individuals or society. Beatty (1992) is unequivocal in her stance: “The individual and change within the individual are not only the necessary and sufficient beginning and ending points for all adult education but also the focal point for the educational undertaking”. She argues that the individual-society dichotomy is false: educated, empowered individuals create social change in ever-increasing spheres. Hass (1992) agrees that social change is brought about by the individuals affected. Mezirow’s transformative theory suggests that individual perspective transformation must precede social transformation (Merriam and Brockett 1997). In describing the ideas of Lindeman, Heaney (1996) and Wilson (1992) point out the complexity of the relationship between individuals and society. For Lindeman, individual growth and development take place within the social context, and changed individuals will have the collective effect of changing society. But Wilson states that it is unclear just how the social order is thereby changed. Others suggest that groups and communities, not individuals, create social change (Horton 1989), that personal autonomy can be achieved only through collective action (Welton 1993), and that the fully developed individual is the consummation of the fully developed society. Ilsley (1992) argues that, although equality in the United States has been defined in terms of individual opportunity, liberty and justice do not arise from individualism. Embedded in this argument is another debate over whether adult education actually did set out with a social purpose that has been lost. A strong practice of adult education for social change is apparent in the work of Paulo Freire in Latin America and Myles Horton at the Highlander Folk School. Their influence continues, although “well on the margins of the adult education mainstream” (Heaney 1996). On the other hand, Rockhill claims adult education was never committed to social justice but to the legitimation of one form of knowledge. Ehrlich (1993) thinks that social change objectives “have not been converted to successful practice”, and Heaney (1996) proposes that it was not a loss of concern but competing visions for change with enormous differences in what is meant by “social change.”

\_\_\_\_\_\_

\_\_\_\_\_\_

Characteristics of an educated person:

-An educated person has the ability to think clearly and independently.

-An educated person has good judgment.

-An educated person knows how to learn.

-An educated person knows how to acquire desired skills by identifying and utilizing available resources, deconstructing the process required for learning a particular skill, and experimenting with potential approaches.

-An educated person has the ability to take initiative and work alone.

-An educated person has the ability to communicate thoughts and ideas in writing, clearly and concisely.

-An educated person has the ability to speak clearly.

-An educated person has the ability to reason analytically and critically.

-An educated person has the ability to think inductively and deductively.

-An educated person questions assumptions.

-An educated person doesn’t blindly accept what they are told; they go see for themselves. They can discern truth from error, regardless of the source.

-An educated person knows how to distinguish between relevant and irrelevant information (between the important and the trivial).

-An educated person knows how to make productive use of knowledge; they know where to get the knowledge that they need, and they have the ability to organize that knowledge into a plan of action that is directed to a definite end.

-An educated person understands human nature and has the ability to establish, maintain, and improve lasting relationships.

-An educated person knows how to establish rapport with others; they know how get others to trust and respect them.

-An educated person knows how to cooperate and collaborate effectively with others.

-An educated person knows how to resolve conflicts with others.

-An educated person knows how to persuade others.

-An educated person has the ability to conceptualize and solve problems.

-An educated person knows how to make decisions.

-An educated person has the ability to see connections among disciplines, ideas and cultures.

-An educated person is able to cross disciplinary boundaries and explore problems and their solutions from multiple perspectives.

-An educated person is someone who has been educated holistically: creatively, culturally, spiritually, morally, physically, technologically, and intellectually.

-An educated person has a broad liberal-arts education. They have a good overview of the following subjects: the natural sciences; the social sciences; history; geography; literature; philosophy; and theology.

-An educated person has depth of knowledge—that is, specialized knowledge–in a particular field.

-An educated person has achieved victory over themselves; they know how to withstand discomfort in the short term in order to achieve important goals in the long term.

-An educated person has the capacity to endure and persevere.

-An educated person is self-aware; they know how to perceive and manage their own internal states and emotions.

-An educated person knows where and how to focus their attention.

-An educated person has ethical values and has integrity.

-An educated person has the ability and the discipline to do what is right.

-An educated person is well-read and has cultural sophistication.

-An educated person has equal esteem for everyone, without regard to gender, race, religion, country of origin, and so on.

-An educated person understands their obligation to leave the world a little better than they found it.

-An educated person is capable of doing new things; they have the ability to generate ideas and turn them into reality. An educated person is innovative.

-An educated person is one whose natural curiosity has been awakened with the purpose of satisfying that curiosity.

-An educated person has the ability to identify needed behaviors and traits and turn them into habits.

-An educated person has the ability to identify harmful behaviors and traits—including thinking habits that are not serving them well—and the ability to modify them.

-An educated person has the ability to keep their life in proper balance.

-An educated person has the flexibility to admit when they’re wrong.

-An educated person has quantitative literacy; they know how to use arithmetic, algebra, geometry, and statistics to solve problems.

-An educated person can speak at least one language other than their own.

-An educated person has financial literacy; they have the knowledge necessary to make sound financial decisions.

-An educated person is adaptable and knows how to deal with change.

-An educated person knows how to handle ambiguity.

-An educated person has the ability to explore alternative viewpoints.

-An educated person has aesthetic appreciation; they can sing and dance well, play at least one musical instrument, and can appreciate architecture, great art, and other expressions of creative genius.

-An educated person has developed the personal philosophy that will allow them to be happy and successful.

-An educated person has the ability and the discipline to constantly improve.

-An educated person has the ability to pursue lifelong learning.

\_\_

Uneducated:

Contrastive term especially in sociology and linguistics, used to refer to people who have or have not had formal schooling (usually to at least the end of secondary or high school), and to their usage. The contrast is often used to suggest a continuum (more educated/less educated), and there are three broad approaches to its use: (1) That the terms are self-evidently useful and do not risk either the self-esteem of the people discussed or the reputation of those engaged in the discussion. (2) That they can sometimes be helpful but should be used with care, because they are at least as much social as scientific judgements. (3) That they are best avoided unless they can be rigorously defined for certain purposes, because they risk oversimplifying or distorting complex issues and relationships and may in effect be euphemisms for distinctions of social class.

\_

Educated vs. uneducated:

We all appreciate that education is extremely important and crucial to our lives but it is also clear that not everyone can receive the level of education they have a right to. This leads us to divide people into two groups, educated and uneducated people. Both of these types of people have their advantages and disadvantages which can be evaluated in terms of economic power, social status and mentality. When we talk about educated and uneducated people, the first thing that comes up for discussion is level of income. There is no doubt that educated people are presented with a lot more opportunities than uneducated people. Their certificates of achievements are what count most of the time and as they have more opportunities to have a good job, they have a better income and consume better food which leads to a longer life. On the other hand, uneducated people who have not completed their minimal educational qualifications do not have much chance of having a good, well-paid job unless they are very lucky. For this reason they have to work in simple jobs or perform very hard labour work in construction or fields increasing the risk of illness and poor health. Unlike educated people who earn more over a lifetime which means a higher quality of life, uneducated people do not have enough income to make ends meet for their families pushing them deeper into poverty. Level of income leads us onto social status. Educated people with a high level of income seem to be a respectable figure for other people whereas uneducated people are viewed in a different light. Uneducated people do not choose to be in that condition of poverty but due to not achieving any level of education which is a basic human right they have not had the same chances in life. Another reason why educated people have a superior status in the eyes of society is because of the way they act and communicate in life but it would not be false to say that sometimes uneducated people beat the educated in terms of being social or respectable. Mentality of both groups can be delved into further where it is generally assumed that educated people are open-minded and uneducated people are closed minded. When a person has gained high quality education they most certainly have an advantage of greater knowledge about the world and other people. Uneducated people tend to follow the same paths and practices of their parents and what they experienced in their life and going forward the same mentality is passed onto their children who do not realise the importance of education through no fault of their own.

\_\_\_\_\_\_

Differences between uneducated and educated person:

Uneducated person Educated person

1. Low on confidence in social affairs. Lack of proper education will keep one low in confidence in public affairs. 1. Due to education there is high level of self confidence in social affairs.

2. Is less respected by society. One notice those without education are less respected than those with proper education. 2. Comparatively well respected.

3. Depends on others to read a sign board or write a bank pay slips etc. 3. Doesn’t depend and will be self-reliant on most issues.

4. Can gain knowledge of things happening around only by hearing. 4. Gains knowledge of happenings by even reading books, papers, magazines etc.

5. Very difficult to occupy higher positions in society 5. If proper effort is taken there are many chances to occupy higher positions in society.

6. In any position, business, social affairs, the one with lack of education is less preferred compared to educated one. 6. More preferred compared to uneducated one.

\_

Why are educated people humble and uneducated ones full of arrogance?

There is a scientific principle behind this known as Dunning-Kruger effect – a cognitive bias. The Dunning-Kruger effect is a cognitive bias wherein unskilled individuals suffer from illusory superiority, mistakenly assessing their ability much higher than is accurate. This bias is attributed to a metacognitive inability of the unskilled to recognize their ineptitude. Conversely, people to whom an aptitude comes naturally tend to underestimate their relative competence, erroneously assuming that tasks which are easy for them are also easy for others. According to Dunning and Kruger “the miscalibration of the incompetent stems from an error about the self, whereas the miscalibration of the highly competent stems from an error about others”. However, there are also highly educated people that are arrogant and uneducated ones that are humble.

\_\_\_\_\_\_\_\_

Education vs. instruction:

I am defining the difference between education and instruction. Education helps in the complete growth of an individual’s personality, whereas instruction merely trains an individual or a group in the efficient performance of some task. A human being may be a great general, an efficient carpenter or a first-class pilot, a lawyer, a mechanic or a pathologist, a renowned doctor, a chemical engineer or a chartered accountant, but still remain a semi-educated, ill-mannered, immoral, unrighteous or unjust person. Similarly, someone may be a very fine painter, a good poet; or possess a love of beauty which is highly delicate and sensitive, but may, at the same time, be cruel or brutal, or an untruthful, unsocial individual, who deliberately ignores his or her duty towards neighbours or even spouse and children. We can say that people who have specialized in certain educational fields are well-instructed individuals, but we cannot necessarily regard them as truly educated. On the other hand, someone who knows and performs his or her duty towards self, family, neighbours and humanity, and at the same time has acquired a basic knowledge about how to earn a livelihood honestly and live a decent life, should be called an educated person. Such a person may not have specialized in a particular field of knowledge, but lack of expertise does not automatically prevent him or her from being recognised as an excellent human being.

\_\_\_\_\_\_\_\_

Education vs. literacy:

The terms ‘Literacy’ and ‘Education’ may sound synonymous but there is a fine line of difference between the two. Literacy mainly revolves around acquiring the ability to read and write whereas education is about overall development of a person making it a complete human who not only read or write but also has the ability to think in broader terms and analysis the things rationally. Every literate person cannot be called an educated person. Education is a much broader concept than literacy. Every educated person is literate; however, every literate is not necessarily educated. Literacy teaches us “how” to read and write and education teaches us “what” to read and write. Literacy gives information whereas Education gives knowledge. The difference between information and knowledge is that information is technical or theoretical know how of any subject whereas knowledge is awareness about how, where, when and why to use that information. Literacy is basically the ability to read and write, at least in one language. Literacy empowers you to be on the same pedestal as the society in which you live. In a world where information comes mostly through the written medium this is a rather crucial ability for anyone. Being literate is necessary. Being literate is indispensable. But being literate is not the same as being educated. Education is more of a process than an ability. It’s a loop: observe -> learn -> understand -> apply -> observe. Literacy is a tool in this process; at least it is if your choice of education is academic: science, literature, history etc. A politician, no matter how illiterate, is educated in the art of being a politician (manipulator, diplomat, shrewd). A painter, even if he doesn’t know the names of colors, can be a great painter if he knows how to use them such that it appeals to observers. They are not the same, literacy and education. The difference between them is much like the difference between a tool and a process. Literacy will give you the ability to read a book. Education is when you, at least, understand what the author is trying to convey.

\_

Between 1950 and 2000 the worldwide illiteracy rate dropped from approximately 44 percent to 20 percent of the population aged 15 and older. Yet the number of illiterate people, according to UNESCO data, increased from approximately 700 million in 1950 to some 860 million in 2000 due to rapid population growth in less-developed countries with inadequate education coverage. In the early 21st century South Asia and sub-Saharan Africa remained among the regions with the highest illiteracy rates, at about two-fifths. India and China—each with populations exceeding 1 billion and illiteracy rates of approximately two-fifths and one-sixth, respectively—accounted for a majority of the world’s illiterate adults. Even in developed countries, illiteracy rates of less than 2 percent continued to mask sizable populations who could not understand written communications or use various forms of print material in their everyday lives.

\_

Literacy depends on nurture, not nature, UB education professor says:

The country in which a child is born largely determines whether he or she will have at least basic reading skills, says UB’s Ming Ming Chiu. A University at Buffalo education professor has sided with the environment in the timeless “nurture vs. nature” debate after his research found that a child’s ability to read depends mostly on where that child is born, rather than on his or her individual qualities. “Individual characteristics explain only 9 percent of the differences in children who can read versus those who cannot,” says Ming Ming Chiu, lead author of an international study that explains this connection and a professor in the Department of Learning and Instruction in UB’s Graduate School of Education. “In contrast, country differences account for 61 percent and school differences account for 30 percent,” Chiu says. Therefore, he concludes, the country in which a child is born largely determines whether he or she will have at least basic reading skills. It’s clearly a case where “nurture” — the environment and surroundings of the child — is more important than “nature” — the child’s inherited, individual qualities, according to Chiu. More than 99 percent of fourth-graders in the Netherlands can read, but only 19 percent of fourth-graders in South Africa can read, Chiu notes. “Although the richest countries typically have high literacy rates exceeding 97 percent,” he says, “some rich countries, such as Qatar and Kuwait, have low literacy rates — 33 percent and 28 percent, respectively.” The study, “Ecological, Psychological and Cognitive Components of Reading Difficulties: Testing the Component Model of Reading in Fourth-graders Across 38 Countries,” analyzed reading test scores of 186,725 fourth-graders from 38 countries, including more than 4,000 children from the U.S. Chiu and co-authors Catherine McBride-Chang of the Chinese University of Hong Kong and Dan Lin of the Hong Kong Institute of Education published the study in the winter 2013 issue of the Journal of Learning Disabilities. The educators used data from the Organization for Economic Cooperation and Development’s Program for International Student Assessment. Besides showing that the country of origin was a better predictor of reading skills than individual traits, the study also showed that other attributes at the child, school and country levels were all related to reading. First, girls were more likely than boys to have basic reading skills, Chiu says. Children with greater early-literacy skills, better attitudes about reading or greater self-confidence in their reading ability also were more likely to have strong basic reading skills. “Children were more likely to have basic reading skills if they were from privileged families, as measured through socioeconomic status, number of books at home and parent attitudes about reading,” says Chiu. “Also, children attending schools with better school climate and more resources were more likely to have basic reading skills. “Our U.S. culture values ‘can-do’ individualism, but we forget how much depends on being lucky enough to be born in the right place,” he says.

\_

Functional illiteracy:

Functional illiteracy is reading and writing skills that are inadequate “to manage daily living and employment tasks that require reading skills beyond a basic level”. Functional illiteracy is contrasted with illiteracy in the strict sense, meaning the inability to read or write simple sentences in any language. Foreigners who cannot read and write in the native language where they live may also be considered functionally illiterate. The characteristics of functional illiteracy vary from one culture to another, as some cultures require better reading and writing skills than others. A reading level that might be sufficient to make a farmer functionally literate in a rural area of a developing country might qualify as functional illiteracy in an urban area of a technologically advanced country. In languages with regular spelling, functional illiteracy is usually defined simply as reading too slow for practical use, inability to effectively use dictionaries and written manuals, etc. In the United States, according to Business magazine, an estimated 15 million functionally illiterate adults held jobs at the beginning of the 21st century. The American Council of Life Insurers reported that 75% of the Fortune 500 companies provide some level of remedial training for their workers. All over the U.S.A. 30 million (14% of adults) are unable to perform simple and everyday literacy activities. The UK government’s Department for Education reported in 2006 that 47% of school children left school at age 16 without having achieved a basic level in functional mathematics, and 42% fail to achieve a basic level of functional English. Every year, 100,000 pupils leave school functionally illiterate in the UK.

\_

Links of functional literacy with poverty and crime:

In developed countries, the level of functional literacy of an individual is proportional to income level and inversely proportional to the risk of committing crime. For example, according to the National Center for Educational Statistics in the United States:

•Over 60% of adults in the US prison system read at or below the fourth grade level

•85% of US juvenile inmates are functionally illiterate

•43% of adults at the lowest level of literacy lived below the poverty line, as opposed to 4% of those with the highest levels of literacy.

•Two-thirds of students who cannot read proficiently by the fourth grade will end up in jail or on welfare.

•Three out of four individuals who receive food stamps read on the two lowest levels of literacy.

•16-to-19-year-old girls at the poverty line and below with below-average reading skills are 6 times more likely to have out-of-wedlock children than their more literate counterparts.

\_

A Literacy at Work study, published by the Northeast Institute in 2001, found that business losses attributed to basic skill deficiencies run into billions of dollars a year due to low productivity, errors, and accidents attributed to functional illiteracy. Sociological research has demonstrated that countries with lower levels of functional illiteracy among their adult populations tend to be those with the highest levels of scientific literacy among the lower stratum of young people nearing the end of their formal academic studies. This correspondence suggests that a contributing factor to a society’s level of civic literacy is the capacity of schools to ensure students attain the functional literacy required to comprehend the basic texts and documents associated with competent citizenship.

\_\_\_\_\_

Education vs. Indoctrination:

A much-debated question is whether and how education differs from indoctrination. Many theorists have assumed that the two are distinct and that indoctrination is undesirable, but others have argued that there is no difference in principle and that indoctrination is not intrinsically bad. Theories of indoctrination generally define it in terms of aim, method, or doctrine. Thus, indoctrination is either: (1) any form of teaching aimed at getting students to adopt beliefs independent of the evidential support those beliefs may have (or lack); (2) any form of teaching based on methods that instil beliefs in students in such a way that they are unwilling or unable to question or evaluate those beliefs independently; or (3) any form of teaching that causes students to embrace a specific set of beliefs—e.g., a certain political ideology or a religious doctrine—without regard for its evidential status. These ways of characterizing indoctrination emphasize its alleged contrast with critical thinking: the critical thinker (according to standard accounts) strives to base his beliefs, judgments, and actions on the competent assessment of relevant reasons and evidence, which is something the victim of indoctrination tends not to do. But this apparent contrast depends upon the alleged avoidability of indoctrination, which itself is a philosophically contested issue.

\_

Too often we think of education as something we “get” at school and university. It is something a teacher drills into us. As Mortimer J. Adler has written: “Everyone knows, or certainly should know, that indoctrination is not genuine teaching and that the results of indoctrination are the very opposite of genuine learning. Yet, as a matter of fact, much that goes on in the classrooms of our schools is nothing but indoctrination.”

Adler posits three causes of this situation:

1. That education is seen as a productive, not collaborative activity. The certificate or degree at the end of the course is seen as a “product” of what the “teacher” does. Learning, though, takes place in the learner, and can take place independently of any teacher. Indeed, most learning occurs in that way.

2. Related to the first point is that people suppose that what students learn, whether in a didactic or a discovery-based approach, is somehow the result of what the teacher, and not the learner, does. Students will learn, whatever the teacher does, but it might not be what the teacher thinks they learn.

3. We often don’t distinguish between real knowledge and opinion, or what Adler terms the “impressions made on and retained by the memory from the development of understanding in the mind”. This results in the learning of facts but not the development of knowledge or wisdom.

Adler concludes: “The conception of the teacher as one who has knowledge of information that he or she transmits to students as passive recipients of it violates the nature of teaching as a cooperative art. It assumes that genuine learning can occur simply by instruction, without acts of thinking and understanding that involve discovery by the minds of students.”

\_\_\_\_\_

Education versus Training:

Formal education is usually thought of studies done in schools. The students range from the very youngest through college to those in adult education. There is also informal education or self-study, where adults read books, listen to tapes and learn through other media. Observing life itself is a form of education. The objective of classes or of self-education is usually to gain knowledge about facts, events, principles, concepts, and such. In some classes the student is required to demonstrate the memorization of facts and the association between concepts. In other classes, they must apply rules to solve problems. Testing concerns memorization and understanding, plus perhaps analytic and problem solving skills. On the other hand, formal training is usually concerned with gaining a skill. Training is done in trade schools, seminars, and business training classes. Learners of training are usually adults, although there are some classes to teach youngsters certain skills. Informal training is usually done through reading, viewing or listening to how-to material. Sometimes that material is then used as a guide, while the person applies the skills learned. For example, you may refer to a how-to book when trying to fix your plumbing at home. Verification of skills is best achieved by actually doing something in the real world. Sometimes tests given in trade schools check for knowledge, as opposed to skill. Often in corporate training sessions and in seminars, there is no verification that the learner had achieved the desired skills. In a nutshell, education concerns remembering facts and understanding concepts. It is usually taught in school, although self-study is possible. Training concerns gaining skills and taught either in trade schools or business training sessions.

\_\_\_\_\_\_\_\_

Education vs. intelligence:

Education is the process through which a person uses his or her cognitive potential to process new information. With enough intelligence and pertinent, relevant, and good teaching strategies, education can lead to acquiring new knowledge. The ultimate goal of education is to instil and create new behavioral patterns of thought and action. Knowledge is the combination of experiences stored in the long term memory center of the human brain. It is the result of exposure and interaction, which construct upon prior knowledge to establish connections that would make the information make sense. There is a vast difference between education and intelligence. Both ideas involve knowledge; however, they are fundamentally different concepts. Intelligence is an innate and natural ability that we are born with. It involves our natural abilities. Traditionally this was measured with an IQ or intelligence quotient quiz. Psychologists have in recent years come to consider the IQ test too limited to truly measure intelligence and Gardener’s multiple intelligences pedagogy has become more established. Gardener’s multiple intelligences state that there are eight different types of intelligences, which we all have and are present in differing amounts. These intelligences include: visual, logical-mathematical, linguistic, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal and naturalist. These intelligences are within us naturally in differing degrees and they can be further developed through education and training. Intelligence is therefore an internal force that governs our capacities and our limitations in acquiring skills in different areas. Education is something that is provided by an external force, typically a teacher, tutor, mentor or parent. Education is what helps you to develop your natural intelligence in different ways. Many people have abilities in different areas that are made to shine, when they receive education. Others do not receive the right type of education and their abilities lie latent within them. There are many people who are perfectly talented and capable in different ways that have not had the same educational opportunities as others and are therefore not perceived to be as intelligent. The difference between education and intelligence is that intelligence is internal, they are skills and abilities that we have naturally in varying degrees and education is given to us externally through teachers, books, parents and so on. Intelligence is the material that teachers use to educate and shape us and develop our natural intelligence. In a lot of societies being educated, especially to University degree level, is seen as synonymous with being intelligent. However, we’ve all encountered University graduates whom we consider unintelligent. As the saying goes, “Many go through the University without the University going through them”. Many intelligent people come from uneducated backgrounds. These are the people who were able to educate themselves through life experience, and/or who have had extremely smart people around them to mentor them. When knowledge is gained from experience, the intelligence acquired is often of better quality, since it is almost all relevant and applicable to their goals. This is intelligence gained in the old fashioned way. But the opposite is hardly ever the case, because it is hard to come off as having below average intelligence with a proper education. Education is related to general development of people and specialized education is for specialized development. Further, education sharpens the intelligence. But intelligence is not fully contingent on education. Socialization, life experience, work experience, etc. also contribute towards intelligence. We lose too many talented people by defining intelligence through exams that are wholly inadequate and constricting. Intelligence is not a matter of formal education. It is a matter of the capacity of the brain to process, represent, and surpass information through inference in the sake of current problem solving needs–what these are. But the capacity to process, represent and surpass information changes with age (reflected in cognitive developmental levels) and with experience (including education) as the brain is an experience-handling tool.

\_

The intelligence–education relationship:

Intelligence is an important factor in how the individual responds to education. Those who have higher intelligence tend to perform better at school and go on to higher levels of education. This effect is also observable in the opposite direction, in that education increases measurable intelligence. Studies have shown that while educational attainment is important in predicting intelligence in later life, intelligence at 53 is more closely correlated to intelligence at 8 years old than to educational attainment. Educational attainment is associated with many life outcomes, including income, occupation and many health and lifestyle variables. Many researchers use it as a control variable in epidemiological and other social scientific studies, often without specifying exactly what environmental effects or set of personal characteristics is being controlled. Other researchers assume that genetically influenced intelligence drives educational attainment, and think that intelligence is the appropriate control variable. Researchers’ different and often unstated causal assumptions can lead to very different analytical approaches and thus to very different results and interpretations. Brighter people tend to get more schooling, and the longer-schooled tend to be brighter. These simple facts elicit surprisingly different interpretations among the many epidemiologists and social scientists who measure education and intelligence for research use. Their different interpretations contribute to differences in methodological and analytical treatments that can have profound impacts on study design, methodological choice, results and interpretation of results. Implicit interpretation of the association between these two variables is common throughout epidemiological and other social science research. With regard to health and other outcomes, this observationally ambiguous association involves the statistical issues of mediation, moderation, confounding and direct and indirect effects. These issues are always troublesome because their treatment depends not only on timing of available measurements, but also on understanding of causal pathways. The issues involved in the association between these particular two variables, however, are especially important to the newly emerging field of cognitive epidemiology. One or the other—especially education, due to its greater availability in datasets—is very commonly used as a control variable; intelligence and education are closely inter-related, and they may be measured with varying degrees of precision. Moreover, there is probably some form of longitudinal cascade between them, quite possibly with reciprocal causal and selection effects; yet, the optimal longitudinal data sequence to understand the processes involved in these reciprocal and selection effects is often unavailable. At the same time, because they are not perfectly correlated, neither education nor intelligence is a perfect proxy for the other. It is thus often important to understand objectively which (if either) exerts a causative effect on an outcome.

\_

Intelligence and education: clearly correlated, but what is the direction of causation?

Intelligence and education have been studied together since the earliest empirical research on these topics. Spearman found teachers’ estimates of intelligence to be correlated with school exam results. Binet developed what we now know as intelligence quotient (IQ) tests to identify those children who would not benefit from normal education. When intelligence and educational outcomes—often assessed as years of full-time education or as highest achieved qualification, and also by school grades or educational achievement test scores—are measured at about the same time, a typical correlation is ∼0.5. Like any other correlation, a cross-sectional correlation between intelligence and education demands an open mind with regard to causal interpretation. Perhaps more intelligent people gain access to more and higher-level education. Perhaps exposure to more education causes higher intelligence test scores. The problem is one that is basic to epidemiology: what is person and what is situation, what is genetic and what is environmental and what is cause and what is effect? Influences may flow in both directions, and longitudinal studies can help to quantify their relative magnitudes.

\_

Does higher intelligence beget better educational outcomes?

In longitudinal studies that measure psychometric intelligence first and educational attainments later (thus assessing that causal chain), there is a moderate to strong correlation between the two, as assessed by years spent in full-time education, the highest qualification obtained by a person or the scores obtained on educational assessments. For example, in a study of approximately 70000 children in the UK, the general factor from the Cognitive Abilities Test (CAT) battery taken at age 11 years correlated about 0.8 with the general factor of grades on the General Certificate of Secondary Education (GCSE) examinations taken at age 16 years. The general factor of the CAT test had very similar loadings from the three domains of verbal, non-verbal (abstract) and quantitative reasoning. Older studies have reported correlations ranging from 0.60 to 0.96 The conclusion from such studies might be that intelligence has stronger causal effects on educational results than vice versa. Various studies repeatedly show that performance on intelligence tests is correlated with school achievement (N. Brody, 1997; Gustafsson & Undheim, 1996; Sattler, 2001). On average, children with higher IQ scores do better on standardized achievement tests, have higher school grades, and complete more years of education. In other words, IQ scores often do predict school achievement, albeit imprecisely. As a result, intelligence tests are frequently used by school psychologists and other specialists in their efforts to identify students with special educational needs. However, three points about the relationship between intelligence test scores and school achievement are important to note:

•Intelligence does not necessarily cause achievement; it is simply correlated with it. Although students with high IQs typically perform well in school, we cannot say conclusively that their high achievement is actually the result of their intelligence. Intelligence probably does play an important role in school achievement, but many other factors—motivation, quality of instruction, family resources, parental support, peer group expectations, and so on—are also involved.

•The relationship between IQ scores and achievement is an imperfect one, with many exceptions to the rule. For a variety of reasons, some students with high IQ scores don’t perform well in the classroom, and other students achieve at higher levels than we would predict from their IQ scores alone. Furthermore, IQ tests seem to predict performance on traditional academic tasks better than they predict performance on every day, real-world tasks or on unusual, multifaceted problems (J. E. Davidson, 2003; Sternberg, Grigorenko, & Kidd, 2005; Wenke & Frensch, 2003).

•IQ scores have a limited shelf life. IQ scores do a reasonable job of predicting students’ school achievement for a short period—say, for the following year or two. They are less useful in predicting achievement over the long run, especially when they have been obtained in the preschool or early elementary years (Bracken & Walker, 1997). In fact, the very nature of what intelligence is changes somewhat as students get older (and thus, how it is measured may also change). The longer the time interval between two measures of intelligence, the greater the fluctuation in IQ, especially when initial measures were taken in the early years (Hayslip, 1994; Sattler, 2001). IQ scores and other measures of cognitive ability often increase over time when children are highly motivated, independent learners and when adults provide stimulating activities and a variety of reading materials (Echols, West, Stanovich, & Kehr, 1996; Sameroff, Seifer, Baldwin, & Baldwin, 1993; Stanovich, West, & Harrison, 1995).

\_

Does more education beget higher intelligence?

The cognitive abilities can be sharpened by continuously using all capabilities given to us. Intelligence can definitely be raised by education. We know that every extra year of schooling increases IQ by about 1.5-2 points of IQ. Also, it accelerates cognitive development by about a third of a cognitive developmental level (specified in neo-Piagetian terms). Most studies of the influence of education on intelligence have not been longitudinal, but they have carefully examined the relation between length of schooling and intelligence, thus attempting to assess the reverse causal chain. Findings generally support the observation that more time in school does lead to greater intelligence. For example, Baltes and Reinert compared the intelligence scores of three cross-sections of German 8- to 10-year olds who were separated in age by 4-month intervals. The intelligence tests used were assessments of induction, verbal comprehension, numerical facility and processing speed from the German Begabungs test system, which was based on Thurstone’s theory and classification of Primary Mental Abilities. Since the German school system at the time required the entering children to be 6 years old as of April 1, it was possible to compare the scores of children whose birthdays fell either just before or just after that dividing point, so that the children were effectively the same chronological ages but had a 1-year difference in schooling. Baltes and Reinert found that 8-year olds who had received an extra year of schooling performed more like the least schooled 10-year olds than the least schooled 8-year olds. They noted, also, that the test most affected in this way—the Grundrechnen test of numerical facility—‘is heavily loaded with material that is covered in the grade levels used’. Tests of more fluid skills were less affected; for example, the Buchstabenzaehlen test of letter counting, which assessed processing speed, and which contained material much less based on taught materials. Schmidt reported analogous results from a South African community of East Indian immigrants who had varying exposure to school that was not dependent on ability. There, the correlations between schooling and two measures of non-verbal intelligence and one measure of verbal intelligence ranged from 0.49 to 0.68. The conclusion from such studies might be that education influences the development of intelligence. However, this requires the caveat that the so-called ‘intelligence tests’ should be scrutinized to examine the extent to which they contain materials that appear in the taught curriculum. Within epidemiology, educational attainment or performance in young adulthood is often implicitly or explicitly assumed to be an outgrowth of social position in childhood, reflecting causal familial environmental effects. For example, in a study modelling the effects of education and childhood and adult socio-economic position (SEP) on midlife cognitive function, Singh-Manoux et al. concluded that, “A major part of the effect of education on cognition … is also indirect. In these data, the influence of education on cognition is mostly through its influence on adult SEP…. The total impact of socioeconomic circumstances [both childhood and adult] on cognitive abilities … is substantial…. This merits the appropriate modelling of the impact of socioeconomic circumstances.”

\_

Intelligence and education: do they share genetic and environmental influences?

One way to resolve some of the confusion over the causes of the association between intelligence and education is to examine the transactions among the genetic and environmental influences contributing to them. The presence of genetic influences on intelligence is well established. These influences increase from <50% of variance in childhood to ∼70% in adulthood. The variance accounted for by shared environmental influences on intelligence declines from early childhood to a near-to-zero contribution in adulthood. Non-shared environment contributes a sizeable minority of the influence through most of life, though this term also contains error of measurement. Multivariate variance decompositions can take this exploration further. They can estimate the environmental and genetic contributions to the correlation between two measured variables such as intelligence and education, and the extent to which the two variables share common genetic and environmental influences. For example, the national test of educational achievement used in The Netherlands at age 12 years (the Cito test) correlated between 0.41 and 0.63 with intelligence test scores gathered at ages 5, 7, 10 (using the Revised Amsterdamse Kinder Intelligentie Test) and 12 years (using the Wechsler Intelligence Test for Children). The additive genetic contributions to variance in the Cito were ∼60%, and genetic influences were the principal reason for the correlations between the intelligence test measures and the Cito. Similar results were obtained by Johnson, McGue and Iacono in an adolescent sample, where a latent variable representation of school grades formed the measure of achievement and intelligence was measured using abbreviated Wechsler Scales (the children’s scales for the under-16 years of age, and the adult scales for those aged ≥16 years). Almost 70% of the educational variable’s variance could be attributed to genetic influence, and >56% was common to genetic influences on intelligence. Even after other predictors of school grades, including engagement, family risk and disruptive behaviours were included in addition to intelligence, 34% of the genetic influences on school grades were shared with intelligence. In a Swedish twin-based study, intelligence was assessed at military conscription—using tests of reasoning, synonym detection, viusospatial perception and mathematics/physics—and education was based on seven categories from <9 years of education to doctoral studies. The genetic correlation between intelligence and education was >0.5, and varied little (from 0.53 to 0.56) across the range of intelligence, and the shared environmental correlation between the two variables was 1.0. This evidence of shared sources of influence is useful for epidemiologists to know and recognize in discussing results. In fact, the causes of the association between intelligence and education might be more complex. Analyses of educational attainment at age 24 years in the USA, based on data from the the Minnesota Twin Family Study, showed that the genetic and environmental contributions to educational outcomes can differ at different levels of intelligence. The genetic variation in educational attainment increased 4-fold from low intelligence (people two standard deviations below the mean intelligence level) to high intelligence (two standard deviations above the mean). By contrast, the shared environmental variation increased >10-fold across the same range of intelligence. In simpler terms, this means that, in this particular geographical and temporal setting, one’s rearing environment (including family resources, broadly conceived) was a much more important source of variance in educational outcomes at lower than at higher levels of intelligence, where genetic sources were much more important. A similar set of analyses was conducted in Sweden, with importantly similar and different results. At higher levels of intelligence, as was found in the Minnesota twin sample, genetic variance in educational outcomes were greater than at low levels of intelligence. For shared environment variance, however, the two countries had opposing results: in Sweden, there was more shared environmental variance at higher than lower levels of intelligence. One should not forget, however, the genetic and shared environmental correlations between intelligence and educational attainments, which were strong in both locations. It is clear that not everyone derives the same benefit from any given educational opportunity and that the same educational opportunities are not available to everyone. Distinguishing between the processes involved in education and intelligence is difficult because it requires measurement that can simultaneously establish causal attributions through precise timing and identify both genetic and environmental influences and their relations to the timing of measurement. The data necessary to do this with respect to education and intelligence are not often available. There are clear implications of the above points for study design.

\_

Different views about education and intelligence and their association in epidemiology:

Intelligence and education are commonly used as possible causes and mediators of other outcomes. Epidemiologists, sociologists, psychologists, economists, social geographers and demographers include intelligence and education as possible influences upon a variety of human factors, including health and illnesses, late-life cognitive function, social mobility and subsequent status attainment. Among such researchers there are striking differences in how the association between intelligence and education is viewed and treated analytically.

\_\_\_\_\_\_\_

Education vs. experience:

Can experience make up for the lack of a degree, or does a degree provide something that experience cannot? Is one more valuable than the other?

First, let’s examine why employers prefer college degrees. Most often, they associate the following characteristics with people who have degrees (and more specifically, four-year degrees):

•A proven ability to analyze problems, conduct research and produce solutions

•A proven ability to learn complex, difficult subject matter

•Proof they are motivated and have drive

•Proof of intelligence

•Better interpersonal skills

•More credible qualifications

While it’s difficult to argue that these characteristics are consistent with people who have earned a four-year degree, it’s easy to question whether or not these characteristics are exclusive to that group. There is nothing wrong with requiring a four-year degree if that’s what the job requires. But, if that requirement is based on a “that’s how it’s always been” mentality, or a personal bias, you are probably missing out on a large pool of job candidates. So, take the time to properly identify and develop the required behaviors, abilities, knowledge and skills of the position. Ask yourself whether or not these required competencies can only be obtained through the process of earning a degree or if they can be acquired through experiences before completing the job description. At minimum, you’ll learn more about the job requirements and better understand how you see this position fitting within your organization.

\_

Experience and education have their own strengths. And whether education or experience is more important depends on which strengths are necessary in what field. Experience gives you practical learning and therefore the ability to handle real-world, on ground situations. In most cases, experience comes in handy if you have been in a particular field or industry and wish to continue in it. The downside of depending purely on experience is that you have to find your own way and may not be equipped with tools for in-depth analyses of data and so on. Education, on the other hand, can give you a wider perspective and equip you with analytical and theoretical knowledge. However, education could make things too theoretical, and the real world never seems to work as neatly as the theories do.

Work Experience vs. Education arguments:

•Argument 1: Higher Education only proves you can succeed in academia, not in a real-world job.

•Argument 2: Success in actual work means more than success in education.

•Argument 3: Work experience doesn’t necessarily provide the skills you need for the next job you’ll have.

•Argument 4: A higher degree guarantees a particular skill set (which can be translated into work skills).

The reality of the experience vs. education debate is that no single argument can cover all the potential situations of job seekers, potential employers and career success. Let me put forward few points to ponder on this subject:

1. The research suggests that working during college is related to acquiring such employer-preferred skills as teamwork and time management. In the ideal case, you – the job candidate – can show that you have both education and experience which equip you to better perform in the job you want to get. To end up with this combination, you might have to take a slower route through your higher education journey, in order to have time available for employment while you’re in school getting those advanced degrees. You’ll lose time, potentially; but you’ll end up with experience and education, and you’ll get to make money along the way. Approaching potential employers with a substantial degree, accompanied by a good work history, can help you not only get the job, but be sure that you’re applying for the job you actually want.

2. A degree you obtained 20 years ago, especially in a technological field, is almost useless now; if you haven’t been accumulating related work experience in the 20 years between getting that degree and applying for the job, then your education won’t help. Things have changed too much, and a large part of why work experience does matter is because (ironically) it shows that you keep up with the trends, keep learning, keep studying and keep educating yourself adequately in order to do your job. A graduate degree, especially from a top school, may give a candidate an edge for an engineering position … In a field like sales, though, results are what matter most – and you don’t get sales results from a graduate program.

3. The amount of education you need largely depends on the field or industry you plan on working in. For example, while a public relations professional almost always needs a bachelor’s degree from a four-year institution, a technician requires trade school education and hands-on experience. It’s no secret that college can open a lot of doors in your career. But now, since so many people now have four-year degrees, does it really make you stand out in a crowded job market? Not nearly as much as it would have in the past. In addition, how much of what you learned at college do you truly use on a daily basis at your job? For a lot of fields, though, you can’t get the experience you need without that education helping you land an opportunity. Although education is a great foundation for any professional, experience is often the key to standing out among other professionals who have the exact same degree that you have. In fact, in a 2010 survey conducted by Internships.com, 93 percent of employers indicated the most important qualification to them when hiring interns was “relevant internships or experience,” with a strong resume and cover letter following closely behind. “High academic performance” and “Attendance at preferred schools” were the two lowest-rated qualifications.

\_\_\_\_\_\_\_

\_\_\_\_\_\_\_

Aims, objectives, functions and importance of education:

\_

Aims of education:

\_

Every pilot has a route-chart and set timing of landing at predetermined destination. There is constitution or set of principles and traditions through which a country is governed. Similarly, there should be properly defined and declared principles, aims and objectives of education or the basis of which policies and programmes of education nave to be formulated to achieve the set goals without wasting scarce energies and resources in chasing the wild goose. Aims give direction to activities. Aims of education are formulated keeping in view the needs of situation. Human nature is multisided with multiple needs, which are related to life. Educational aims are correlated to ideals of life. The goal of education should be the full flowering of the human on this earth. According to a UNESCO study, “the physical, intellectual, emotional and ethical integration of the individual into a complete man/woman is the fundamental aim of education.” The goal of education is also to form children into human persons committed to work for the creation of human communities of love, fellowship, freedom, justice and harmony. Students are to be moulded only by making them experience the significance of these values in the school itself. Teachers could achieve this only by the lived example of their lives manifested in hundreds of small and big transactions with students in word and deed.

\_

The most basic problem of philosophy of education is that concerning aims: what are the proper aims and guiding ideals of education? What are the proper criteria for evaluating educational efforts, institutions, practices, and products? Many aims have been proposed by philosophers and other educational theorists; they include the cultivation of curiosity and the disposition to inquire; the fostering of creativity; the production of knowledge and of knowledgeable students; the enhancement of understanding; the promotion of moral thinking, feeling, and action; the enlargement of the imagination; the fostering of growth, development, and self-realization; the fulfilment of potential; the cultivation of “liberally educated” persons; the overcoming of provincialism and close-mindedness; the development of sound judgment; the cultivation of docility and obedience to authority; the fostering of autonomy; the maximization of freedom, happiness, or self-esteem; the development of care, concern, and related attitudes and dispositions; the fostering of feelings of community, social solidarity, citizenship, and civic-mindedness; the production of good citizens; the “civilizing” of students; the protection of students from the deleterious effects of civilization; the development of piety, religious faith, and spiritual fulfillment; the fostering of ideological purity; the cultivation of political awareness and action; the integration or balancing of the needs and interests of the individual student and the larger society; and the fostering of skills and dispositions constitutive of rationality or critical thinking.

\_

\_

The aim of education is to bring desirable changes in the behaviours of the learner. It helps in the all-round development of a child’s personality and inclusion of healthy attitudes and good values. Since education changes according to the changing needs of the society, the aims of education also varies from time to time in the same society. The aims and objectives are not uniform for all stages of education. There are differences in aims and objectives of primary, secondary and higher education due to variance of age and maturity experiences, physical, mental and emotional growth of the child.

\_

The objectives of primary education are as follows:

Literacy:

The child should learn the first language the mother-tongue to a level where he can communicate his ideas easily.

Numeracy:

The child should develop ability in four fundamental numerical operations and to be able to apply these to solve problems in his daily life.

Technocracy:

The child should learn the method of inquiry in science and should begin to appreciate science and technology.

Nationalism:

The child should develop a respect for national symbols like the flag and the anthem and should know about learn to dislike to racism and communalism.

Human dignity:

The child should develop healthy attitudes towards human labour and dignity.

Sanitary habits:

The child should develop habits of cleanliness and healthful living and an understanding of the proper sanitation and hygiene of the neighborhood.

Aesthetic Sense:

The child should acquire a taste for the good and beautiful and should take care of its surroundings.

Cooperative Spirit:

The child should learn to cooperate with others and appreciate the usefulness of working together for the common good. Besides these objectives, other desirable qualities are development of character and personality through initiative, leadership, kindness, honesty etc. These should be developed during the primary school stage.

\_

Individual and Social Aims:

Individual aims and social aims are the most important aims of education.

Individual Aims:

Sir Percy Nunn observes, “Nothing goods enters into the human world except in and through the free activities of individual men and women and that educational practice must be shaped the individual. Education should give scope to develop the inborn potentialities through maximum freedom.”

Because:

(1) Biologists believe that every individual is different from others. Every child is a new and unique product and a new experiment with life. Thompson says, “Education is for the individual”. Individual should be the centre of all educational efforts and activities.

(2) Naturalists believe that central aim of education is the autonomous development of the individual.

(3) Psychologists believe that education is an individual process because of individual differences. No two individuals are alike. So education should be according to the interest of the individual.

Criticism of Individual Aim:

Individual aim is not desirable because man is a social animal. Society’s interest should be protected.

(1) Individual aim makes individual selfish.

(2) Maximum freedom may go against the society.

(3) Individuality cannot develop from a vacuum; it develops in a social atmosphere.

(4) Unless society develops, individual cannot develop.

(5) Who will recognize society- where individual is selfish?

Social Aim:

The supporters believe that society or state is supreme or real. The individual is only a means. The progress of the society is the aim of education. Education is for the society and of the society. The function of education is for the welfare of the state. The state will make the individual as it desires. It prepares the individual to play different roles in society. Individuality has no value, and personality is meaningless apart from society. If society will develop individual will develop automatically. Here society plays an important role.

Criticism of Social Aim:

(1) It makes individual only a tool of government.

(2) It reduces individual to a mere non-entity.

(3) Society ignores the legitimate needs, desires and interests of the individual.

(4) It is against the development of individuality of the individual.

Synthesis between individual and social aims of education:

Neither the individual nor the society can exist independent of each other. The individual is the product of the society while society finds its advancement in the development of its individual member. Individual cannot develop in vacuum. According to John Adams, “Individuality requires a social medium to grow.” And T.P. Nunn says, ‘Individuality develops in social environment’. According to James Ross, “The aim of education is the development of valuable personality and spiritual individuality.” The true aim of education cannot be other than the highest development of the individual as a member of society. Education enables the development of individuals and society. The different functions of education towards the individual and society are as follows:

Functions towards the individual

1. Development of inborn potentialities

2. Modifying behaviour

3. Overall development (social, mental, emotional, spiritual)

4. Preparing for the future (livelihood, education)

5. Developing the personality

6. Developing adjustability

Functions towards society

1. Social change and control

2. Reconstruction of experiences

3. Development of social and moral values (like cooperation, tolerance, sympathy, fellow-feeling, respect, affection)

4. Providing opportunity or equality

\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_

Functions of Education:

Education functions refer to the contribution of schools to the development and maintenance of education at the different levels of society. Traditionally, education is often perceived as only a means for achieving the economic, social, political, and cultural values and goals. Due to the rapid development and change in nearly every aspect of the world, people begin to accept education in itself as an important value or goal. Education represents learning and development. Like economics, politics, culture, and social relationship, education becomes a necessary component of our life particularly in an era of great change and transformation. The content, system, and structure of education need to be developed and maintained. Not only in civilized societies but even in primitive societies the adults try to educate adolescents in the ways of adult life. Bayli (1987) pointed “to put it briefly, the individual’s character, personality, culture, thinking, common sense, skill, habits and even the other less significant thing of life depends upon education”. Now let me discuss functions of education:

1. Development of Natural Abilities:

Education is the basic need of every one. “In fact if the child is helped to develop a balanced personality and a good character, there can be no better preparation for adult life” (Best, 1994). If education can perform this task then men and women become highly responsible and useful citizen. No one can live alone; to move with the society education is necessary for all. Aggarwal (1988) stated “It’s the education which makes individuals responsible for their duties as a citizen. The human development of the country depends on education”.

2. Control and Sublimation of Basic Instincts:

Everything being is born into the world possessed of certain basic instincts, there may be difference of opinion about the instincts that the child is born with, but there can be no doubt about the presence of some instincts. Aggarwal (1988) explained “the child’s mind is not a blank table on which anything can be written”. “Psychologists have demonstrated that not only does the human infant possess some instincts, but also those there are individual difference in his instincts in a manner that he likes” (Borko & Putnam, 1996). But human being live in-groups, and home it becomes necessary for them to control some instincts and to change the mode of expression of other instincts in such a manner that they don’t injure other people. Barnet (1990) notice “besides this there are certain instincts which can be fulfilled only with the cooperation of another human being”. Education helps in the control, sublimation and change of instincts various kinds of arts are used as a medium of sublimation. Calder head (1989) explain “Education in social life helps the child to learn how to control his instincts same end is served through the system of reward and punishment found in the family, college or society at large”. Rules of administration and means of social control also help in this work.

3. Creation of Useful Citizen:

Although many thinkers have dream of a society without government in actual fact no such society exits. “Individual who has been deprived of their citizenship or have never been granted this makes all kinds of efforts to get the citizenship of one nation or another” (Callahan, 1995). If they cannot obtain it they have to face all kinds of difficulties. Chhaya (2004) noted “The relationship between the individual and the state is universal; in this relationship the status of the individual is called the status of citizenship. Hence it is desired that the individual should be trained is behaving as a citizen so that he can fulfil his duties to the state”. In the present age, this function of education is emphasized very much because most states themselves are responsible for providing education. Donald, Holsinger (2000) stated “It is believed that education must provide capable citizens because in the absence of such citizens the adjustment between the individual and the state would suffer”.

4. Development of Sense of Community:

The statement that man is social animal means no more than that he lives in society. It does not imply that the human child is possessed of social qualities at birth. These social qualities acquired and taught. One major objective of education therefore is the teaching of social qualities and development of a sense of community. Hashim, Abbasi (1999) pointed “This community feeling urges the child to cooperate with his fellows, to make sacrifices if they become necessary, to rise above the consideration of caste and creed and develop a sense of oneness with the nation etc.” Calder head (1989) observed “the development of this feeling depends upon opportunities provided in family life, play groups and schools and colleges and due to this reason educational institutions pay particular attention for this purpose”. “The students are given the opportunities of collectively running the administration of organizing extra-curricular programmes of devising constructive programmes which help in developing this sense of community” (Ediger & Rao, 2005). This feeling is the basic of national unity.

5. Protection and increase of Culture and Civilization:

As compared to other animals, man has progressed more because human society has succeeded in protecting its knowledge and in conveying it to future generation. This has been through the medium of culture and civilization. Culture refers to a set of beliefs and skills, art, literature, philosophy, religion, music etc. that are not carried through the mechanism of heredity. They must be learned. This social heritage (culture) must be transmitted through social organizations. Education has this function of cultural transmission in all societies. Naik (1998) found “A child born in the present time does not think of everything from the beginning. His thinking and modes of behaviour are determined by customs, traditions and social institutions which are repositories of the experience and thinking of his ancestors”. “It is now universally accepted that culture and civilization should be protected and allowed to grow through new developments” (Dean, 1984) This is mainly achieved through education. Olson & Osborne (1991) explained “The child receives the social heritage in the form of education, and then through education the child develops his own knowledge, character and personality, thus becoming capable of contributing to the literary, culture and social life of his society”. In this manner he helps to maintain his own culture and to add to it. Rashid (1998) stated “Developments in the arts, literature the science etc. are all the efforts of educated people”. Their efforts are collected in the form of books and objects in libraries, museum etc. and thus passed on as social heritage to the coming generations.

6. Encouragement to Social Welfare:

Both formal and informal education helps the individual to evolve a critical attitude which helps him to analyse everything presented to him. If he finds any fault in it, education will exercise his mind to find some ways of repairing the faults. In this manner education has been the basis of all social welfare programmes. Rice, J.K. (2003) stated “Education thus leads to a continuous analyze of the various constituents of society, its institutions modes of social control etc, and inspire efforts to make improvements where they are needed”. “Better education system enhances the social, economical and technological improvement in the country” (Gibbons, 1998). “Education is the process of training man to fulfil the aims of society by exercising all the faculties to its fullest extent as a member of society” (Ruhela & Singh, 1990) this aim is discovered by reason and his freewill.

7. National Development:

The overall development of all national groups is essential for the development and progress of human society, but this is not possible without universal education. Sharma Promila (2005) found “It is for this reason that the UN is making efforts to provide education to the backward countries. In every country efforts are made to develop a sense of belonging among its citizens, and the sense of nationality”. It helps to induce the individual to do his best for the nation, besides almost every nation has its own plan of national education which seeks to fulfill the functions of the nation.

8. Use of Leisure:

One of the main functions of education is to teach an individual to make the best use of leisure. Using leisure time in educational activities is itself useful. “On the other hand, education itself guides the individual people can use their leisure time effectively by devoting themselves to magazines, arts, etc” (Smith, 1969). Gara & Oumer (2007) found “even the standard of their normal conservation discussion etc is higher than that of the uneducated person”. Education helps to develop various kinds of interests that leisure itself does not become a burden.

9. Improving National Unity:

Aeth (1975) observed “If the nation is to be saved from complete fragmentation, it is necessary to generate a sense of emotional unity in all men and women, without education it’s impossible to create national unity among different societies”. Hayes (1987) pointed “Through education traditions, customs and national language are developed in people, and then individual can be expected to feel that they are members of the same nation and to behave in the interest of the nation”. It’s the national unity by which a nation gets its identity in the world. Education acts as integrative force in society by communicating values that unite different sections of society. The family may fail to provide the child the essential knowledge of the social skills and value of the wider society. The school or the educational institutions can help the child to learn new skills and learn to interact with people of different social backgrounds.

10. To complete the socialization process:

The main social objective of education is to complete the socialization process. The family gets the child, but the modern family tends to leave much undone in the socialization process. The school and other institutions have come into being in place of family to complete the socialization process. “Now, the people fell that it is “the school’s business to train the whole child even to the extent of teaching him honesty, fair play, consideration for others and a sense of right and wrong”. The school devotes much, of its time and energy to the matter such as co-operation, good citizenship, doing one’s duty and upholding the law. Directly through textbooks and indirectly through celebration of programmes patriotic sentiments are intimates and instilled. The nation’s past is glorified, its legendary heroes respected, and its military ventures justified.

11. Reformation of Attitudes:

Education aims at the reformation of attitudes wrongly developed by children already. For various reasons the child may have absorbed a host of attitudes, beliefs and disbeliefs, loyalties and prejudices, jealously and hatred etc. these are to be reformed. It is the function of education to see that unfounded beliefs, illogical prejudices and unreasoned loyalties are removed from the child’s mind, though the school has its own limitations in this regard, it is expected to continue its efforts in reforming the attitudes of the child.

12. Education for jobs and economic growth:

The conventional way of proceeding in life through the ages has been in four stages: childhood and education, putting knowledge to work by obtaining a career, raising a family, growing old and retiring from the daily conundrums of life. The logical step after the initial childhood years is to attend an educational institute and gather as much knowledge and information as possible for a better life in the future. This helps in developing a better base for securing a career later thus advancing the individual into the next phase of life. This helps in providing the basics such as food, water and shelter as well as a host of other needs. Thus, a better education will ensure higher returns and subsequently a better quality of life. Education is an instrument of livelihood. Education helps people work better and can create opportunities for sustainable and viable economic growth now and in the future. Education is one of the strongest drivers of economic progress and prosperity. Studies have shown that each additional year of schooling raises average annual gross domestic product (GDP) growth by 0.37%. The Education for All Global Monitoring Report showed that, in 1965, adults in East Asia and the Pacific had, on average, spent 2.7 more years in school than those in sub-Saharan Africa. Over a 45-year period, average annual growth in income per capita was 3.4% in East Asia and the Pacific, but 0.8% in sub-Saharan Africa. The difference in education levels explains about half of the difference in growth.

13. Conferring of Status:

Conferring of status is one of the most important functions of education. The amount of education one has is correlated with his class position. Education is related to one’s position in the stratification structure in two ways. (1) An evaluation of one’s status is partially decided by what kind of education one has received and (2) Many of the other important criteria of class position such as occupation, income and style of life are partially the result of the type and amount of education one has had. Men who finish college, for example, earn two and a half times as much as those who have a grammar school education.

14. Education encourages the spirit of competition:

The school instils co-operative values through civic and patriotic exhortation or advice. Yet the school’s main emphasis is upon personal competition. For each subject studied the child is compared with the companies by percentage of marks or rankings. The teacher admires and praises those who do well and frowns upon those who fail to do well. The school’s ranking system serves to prepare for a later ranking system. Many of those who are emotionally disappointed by low ranking in the school are thereby prepared to accept limited achievement in the larger world outside the school.

15. Skill development:

Education trains in skills that are required by the economy. The relation between the economy and education can be an exact one. For example the number and productive capacity of engineering firms are limited by the number of engineers produced by education. In planned economy, normally it is planned years in advance to produce a definite number of doctors, engineers, teachers, technicians, scientists etc. to meet the social and economic needs of the society.

16. Fosters Participant Democracy:

Education fosters participant democracy. Participant democracy in any large and complex society depends on literacy. Literacy allows full participation of the people in democratic processes and effective voting. Literacy is a product of education. Educational system has this economic as well as political significance.

17. Education imparts values:

The curriculum of the school, its extracurricular activities and the informal relationships amongst students and teacher communicate social skills and values. Through various activities a school imparts values such as co-operation or atmospheric, audience, fair play. Values and orientations, which are specific to certain occupations, are also provided by education: For example, the medical students are socialized and educated in a particular way in medical college. This may help them to become proper medical practitioners, other values and orientations relevant to the functioning of industrial society are also provided by education.

18. Health and Longevity:

Education is a strong and significant predictor of greater life expectancy. The more years of education a person has, the greater their likelihood of engaging in healthy behaviors (and, inversely, the lower their likelihood of engaging in unhealthy behaviors, like smoking).

19. Combat HIV/AIDS, malaria and other diseases:

Education is the best vaccine against HIV and AIDS. With an estimated 6,800 people newly infected with HIV every day, education must be at the forefront of any response to HIV and AIDS. Education can impart knowledge and skills and encourage positive attitudes and behaviour that will reduce a person’s chance of getting HIV. Educational institutions take a central role in HIV prevention efforts because they are the best way to reach large numbers of young people. Similarly, school health, awareness and hygiene programmes help to combat malaria and other diseases. One study, covering thirty-two countries, found that women with post-primary education were five times more likely than illiterate women to know about HIV/AIDS. Education has been recognised by UNAIDS to be a key element of effective HIV prevention. Even in the absence of HIV-specific interventions, education offers an important measure of protection against HIV. The Global Campaign for Education has estimated that universal primary education would prevent 700,000 new HIV infections each year. Education reduces the vulnerability of girls, and each year of schooling offers greater protective benefits. Recent survey data from 64 countries indicate that only 40% of males and 38% of females aged 15-24 have comprehensive and correct knowledge about HIV and how to avoid transmission. These levels are far short of the target established at the UN General Assembly Special Session on HIV/AIDS (UNGASS) of 95% by 2010. School-based HIV education offers a very cost-effective approach to prevention as schools provide a practical means to reach large numbers of young people from diverse social backgrounds.

20. Human Capital:

An educated population provides a more valuable human capital base to the economy. A developed economy has maximum concentration of jobs in the tertiary sector which requires a highly skilled work force which has expertise in specific fields. For instance the most developed country in the world, the USA has the most skilled human resources with maximum efficiency. Also, developing countries which adopt tried and tested technologies from other nations require skilled engineers, technicians and managers who can put it to good use. This can only be achieved by providing quality education to the population at a primary, secondary and higher secondary level.

21. Broadens perspective:

This is one of the key advantages of education. Even if we consider economic benefit of education but its most important contribution that it helps in changing minds of people. Education makes people understand other cultures, religions, places and culture. It helps gain understanding of what the world is all about. This very important if we see from perspective of developing nations which are plagued by old notions. In countries such as India girl and boy child are differentiated. Even worse women are considered cause of girl child while science tells that it is the other way round. Similar old style dogmas exist everywhere in the world and the only way to eradicate them is proper education.

22. Hones potential:

An education provides individuals with the ability to develop their potential to a much greater extent. Exposure to different fields and interests allows a person to choose between a number of options and hone in on the one field that they have the ability to excel in. This also helps develop interest in a number of other non-academic fields such as art, culture, music, all of which are important to have a wholesome life. It improves interaction between people and results in more efficient exchanges.

23. Long-term gains:

The long-term economic, social and personal gains from education are proven – for individuals, families, communities and the development of a nation. To achieve this there must be a minimum standard of education and sufficient levels of literacy, numeracy and life skills to enable people to lift themselves out of absolute poverty.

End Poverty:

Education is the one of the most effective ways to reduce poverty. According to UNESCO, 171 million people could be lifted out of poverty – a 12% drop in global poverty – if all students in low-income countries left school with basic reading skills. UNESCO also found that one extra year of schooling increases an individual’s earnings by up to 10%, and each additional year of schooling raises average annual gross domestic product by 0.37%.

End hunger:

The most recent UNESCO research in 2013 shows that there are approximately 47 million children in low-income countries who are stunted as a result of malnutrition in early childhood. If all mothers in those countries had a primary education, 1.7 million children would be saved from stunting. If those mothers had a secondary education, 12.2 million children would be saved from stunting.

Education reduces malnutrition

• The expansion of women’s education since 1990 accounts for a reduction of 902,799 child deaths

• Women’s education is also proven to reduce child stunting.

24. Education reduces inequality:

For individuals who do not have a wealthy or fortunate background, the provision of quality education puts them at the same footing as the vast majority of job seekers allowing them to rise from their present level. This phenomenon, also known as distributive justice, helps in reducing inequalities, both economic and social, in society. Education is a key factor associated with men’s attitudes toward women – men with less education – particularly those who have not completed secondary school, have more rigid attitudes and are more likely to be violent towards their family. As more children, from across the demographic, geographic and cultural spectrum become educated, we are likely to see an improvement in a country’s income inequality. One study showed that a 0.1% improvement in a country’s education equality can, over forty years, raise its per capita income by 23% higher. Research demonstrates that with more education equality, Vietnam’s economic performance improved and, in 2005, its GDP surpassed Pakistan’s, where education equality levels are half those of Vietnam’s. And, with better education, people from traditionally disadvantaged communities are better positioned to advocate for their own rights and needs, gain entry into higher echelons of economic, social and civic life and help narrow gaps of inequality across their societies.

25. Clean Water and Sanitation:

As communities become better educated about the links between their sanitation and health they see substantial improvements in sanitation. And, as societies become more economically prosperous, it stands to reason that they will be better able to create modern water and sanitation facilities and systems. In many societies, girls can spend as many as 15 hours per week fetching water for their families, leave no time for school, UNESCO reports. Similarly, without access to safe sanitation, there are many more sick children who will miss school. In Ethiopia, 6.8 million people gained access to improved sanitation from 1990 to 2006. This was partly the result of having educated communities about the links between sanitation and health, and of implementing new, affordable technologies.

26. Sustainable Cities and Communities:

With education, people are more likely than not to understand, support and craft creative solutions that ensure the basic ingredients of sustainable cities and communities are in place. Good urban planning, efficient energy use, good water and sanitation management, social inclusion and other elements of well-working communities require people with knowledge and skills that are only available through quality education. At the heart of a World Bank Sustainable Cities Initiative, for example, are awareness-building programs, development and implementation of local diagnostic tools, the creation of policy reforms and other tasks that require not just primary but advanced education.

27. Peace and Justice:

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels. Education is an essential precursor to peace, tolerance and a healthy civil society. Education encourages transparency, good governance, stability and helps fight against graft and corruption. Studies have shown that people with secondary educations are more likely than those with only primary education to show tolerance for people who speak another language (a 21% difference in Latin America and 34% among Arab States), immigrants (26% and 16%, respectively), people of a different religion (39% and 14%), people with HIV (45% and 12%) and people of a different race (47% and 28%). We also know that literate people are more likely to participate in the democratic process and exercise their civil rights, and that, if the enrolment rate for secondary schooling is 10 percentage points higher than the average, the risk of war is reduced by about three percentage points. Education is a critical building block for the development of an inclusive, democratic society and must be a central component of efforts to promote global security. Education nourishes peace. Across society, every year of schooling decreases a male’s chance of engaging in violent conflict by 20 percent.

28. Overcoming Superstitions:

Illiterate and uneducated people often tend to hold certain superstitious beliefs. Education and awareness are the best ways to combat superstitions and replace such beliefs with reason and logic.

29. Saves you from being fooled/ cheated:

Education saves you from being exploited and fooled. It is easier to take advantage of illiterate people. They may be trapped into signing false documents or be deprived of some right which they have because unlike an educated person they are not well aware of their rights and freedoms.

30. Keeping up with the world:

We live in an ever changing world. New technologies keep coming up and if you don’t want to be left behind, you must keep up with the world which is moving really fast. Without education it will be really difficult for you to adapt to all these changes. An educated person is much more aware of the latest technologies and all the changes that are taking place in the world. For example, an uneducated person may not know about the benefits of the internet whereas an educated person uses this gift of technology regularly for work as well as for entertainment.

\_\_

Manifest and latent functions of education:

Due to the difficulty of drawing a rigid boundary between the manifest and latent functions of education, they have been grouped differently by various authors. Among the manifest functions of education are the accumulation and transmission of cultural heritage, the socialization of the individual, the raising of innovative change agents, and other political, selective and economic functions. Latent functions, on the other hand, include providing a peaceful life, serving as a meeting place for marital partners, eliminating negative attitudes and behaviors, producing new social networks and bringing better social status.

\_

Role of education in human life:

Education is a major aspect of development of any modern society. Education brings awareness in people and keeps them away from superstitious beliefs. It provides best possible settlement not only in India but also in many western countries. Education will direct the person to move in right path at all times in life. A highly educated person can always manage things independently. An educated person can led his life with many comfort. Education makes students physically and mentally strong. Education is the best investment for the people because well educated people have more opportunities to get a job which gives them satisfaction. An educated person will be always respected in any part of world and his talent will awarded and rewarded. Education also makes the person to be positive. Sometimes people scarify their enjoyment and work hard day and night, because they realize that education is their passport for the further. Literacy rate depend on education. All the advancement in technology is due to education. Education is the ultimate factor that provides employment, so it plays a vital role in development of the country and also in raising the per capita income of the country. Education is the best weapon to eradicate poverty. Education promotes knowledge and understanding in rural communities. Education keeps the people away from superstitions beliefs. Educated person will be health conscious. Education is only pathway to maintain success in life. It increases the ethical values of the person. Education is not only learning about books but also learning about life. It rapidly increases your skill and awareness. Educated person will identify the difference between good and bad. Education provides food at all times. In life if education is there with us, there is everything in life. It is best source to raise the economy.

\_\_\_\_\_\_\_\_\_\_

Education as a Tool for Disrupting Terrorism:

Education is the enemy of radicalism. Malala shot in the face by Taliban extremists while walking to school knows better than anyone that education is the enemy of radicalism. Fundamentalists try to prevent people from accessing schools, particularly women, because these fanatics’ hate is complemented by serious ignorance. A crucial effort in fighting terrorism must be support for public education in the Muslim world, which is the best way to mitigate the role of those madrassas that foment extremism. Development alleviates the injustice and lack of opportunity that proponents of violence and terrorism exploit. Some say that education won’t eradicate extremism. Few studies show that even the most educated people harbour hate and commit acts of violence. But as Malala says, ignorance and poverty play a major role in providing soldiers to the armies of global extremists. That’s why terrorist groups so passionately oppose learning, and why we should do everything and anything possible to provide a solid education for every child on earth.

\_\_

Importance of education is summarized in the figure below:

\_\_\_\_\_\_\_

\_\_\_\_\_\_\_

Education and society:

Education is sees as a means of cultural transmission from one generation to another in any given society. Society is defined as the whole range of social relationships of people living in a certain geographic territory and having a sense of belonging to the same group. The relationships between the two concepts are so strong that it is not possible to separate them because what happens to one affects the other. Educational institutions are micro-societies, which reflect the entire society. The education system in any given society prepares the child for future life and instils in his those skills that will enable him to live a useful life and contribute to the development of the society. Education as a social phenomenon does not take place in a vacuum or isolation; it takes place in the society and this normally begins from the family, which is one of the social institutions responsible for the education of the child.

\_

Symbolic Interactionism and School Behavior:

Symbolic interactionist studies of education examine social interaction in the classroom, on the playground, and in other school venues. These studies help us understand what happens in the schools themselves, but they also help us understand how what occurs in school is relevant for the larger society. Some studies, for example, show how children’s playground activities reinforce gender-role socialization. Girls tend to play more cooperative games, while boys play more competitive sports.

\_

Sociology of education:

Education is a social institution that sociologists are very interested in studying. This includes teaching formal knowledge such as reading, writing, and arithmetic, as well as teaching other things such as morals, values, and ethics. Education prepares young people for entry into society and is thus a form of socialization. Sociologists want to know how this form of socialization affects and is affected by other social structures, experiences, and outcomes. Sociology of education is a field that focuses on two separate levels of analysis. At a macro-level, sociologists work to identify how various social forces, such as politics, economics, culture, etc., creates variation in schools. In other words, what effects do other social institutions have on the educational system. At a micro-level, sociologists look to identify how variation in school practices lead to differences in individual-level student outcomes. That is, when schools have different teaching methods or have different practices, how does that affect the individual students and what are the individual outcomes. A classic study by sociologist James Coleman done in 1966, known as the “Coleman Report” looked at the performance of over 150,000 students and found that student background and socioeconomic status were much more important in determining educational outcomes than were differences in school resources, such as per pupil spending. He also found that socially disadvantaged black students benefited and did better in school when they were in racially mixed classrooms rather than black only classrooms. This ignited controversy that still continues today.

\_

Major Sociological Theories of Education:

Like any other topic in sociology, the three major theoretical perspectives (functionalism, conflict theory, and symbolic interaction theory) each have different views on education:

1. The functionalist perspective argues that education serves many important functions in society. First, it socializes children and prepares them for life in society. This is not only done by teaching “book knowledge,” but also teaching the society’s culture, including moral values, ethics, politics, religious beliefs, habits, and norms. Second, education provides occupational training, especially in industrialized societies and most jobs today require at least a high school education, and many professions require a college or post-graduate degree. The third function that education serves, according to functionalist theorists, is social control, or the regulation of deviant behavior. By requiring young people to attend school, this keeps them off the streets and out of trouble.

2. The symbolic interaction view of education focuses on interactions during the schooling process and the outcomes of those interactions. For instance, interactions between students and teachers can create expectations on both parts. The teacher begins to expect certain behaviors from students, which in turn can actually create that very behavior. This is called the “teacher expectancy effect.” For example, if a white teacher expects a black student to perform below average on a math test when compared to white students, over time the teacher may act in ways that encourage the black students to get below average math scores.

3. Conflict theory looks at the disintegrative and disruptive aspects of education. These theorists argue that education is unequally distributed through society and is used to separate groups (based on class, gender, or race). Educational level is therefore a mechanism for producing and reproducing inequality in our society. Educational level, according to conflict theorists, can also be used as a tool for discrimination, such as when potential employers require certain educational credentials that may or may not be important for the job. It discriminates against minorities, working-class people, and women – those who are often less educated and least likely to have credentials because of discriminatory practices within the educational system.

\_

Social functions of education:

Schools ideally perform many social functions in modern society. These include socialization, social integration, social placement, and social and cultural innovation. Education plays a large part in the socialization of children into society. Most American children spend the required 180 days each year in school from the first grade through high school. Most of a child’s day through these years is devoted to activities involving school such as attending classes, doing homework, and participating in extracurricular activities. The school format is designed to teach children to be productive members of society. Schools bear most of the responsibility of preparing young people for the working environment. Children learn punctuality, time management, and to respect the authority of their teacher which prepares them to respect their boss. The curriculum also plays an important role. A class in civics teaches a child to be a good American, and a class in home economics teaches a child how to operate a household. Most socialization, however, occurs beyond the curriculum. Extra-curricular activities such as student government, being a part of a school newspaper, or being in a business club provide anticipatory socialization for adult jobs.

\_\_

Social benefits of education:

On average across 15 OECD countries, a 30-year-old male tertiary graduate can expect to live another 51 years, while a 30 year-old man who has not completed upper secondary education can expect to live an additional 43 years. A similar comparison between women in the two educational groups reveals less of a difference than that among men. In 27 OECD countries, on average, 80% of young tertiary graduates say they vote, while only 54% of young adults who have not completed upper secondary education do so. The difference in voting rates by level of education is much smaller among older age groups. Education can bring significant benefits to society, not only through higher employment opportunities and income but also via enhanced skills, improved social status and access to networks. By fully recognising the power of education, policy makers could better address diverse societal challenges.

\_\_\_\_\_\_

Education as instrument of social change:

Social change:

Social change refers to the modifications in the organization and behavior of the group expressed in its laws, institutions, customs, modes and beliefs. When change is supposedly for the better it becomes progress which is essentially an evolutionary concept. The term social change might imply changes in social attitudes, behavior, customs, habits, manners, relations and value of people, in social institutions and structures, in the ways or styles of living.

\_

The role of education as social agent is universally recognised. Social change always takes place when humans need change in society. Social change comes into action when existing social setup fails to understand and meet the needs of humans. Education always initiates to bring permanent changes in personality of human being. In the second half of 20th century the role of education was overstressed to fulfil the needs of nation. Education is still used to serve as an agent to nation. Social changes take place as a result of multiple changes that take place in the social and non-social environment. Education can bring social changes in outlook and attitude of humans. It can initiate a change in the pattern of social relationships. Education empowers the individual. But individual can’t bring change solely. Societal change always comes from the collective transformation of people of society. Education is an independent institution now and it can bring change in every aspect of men’s life. Francis J. Brown remarks that Education is a process which brings about changes in the behavior of society. It is a process which enables every individual to effectively participate in the activities of society and to make positive contribution to the progress of society. Most progressive people feel that the process of inquiry or problem-solving is the proper tool for managing change in society. Education should not be judged in terms of liability to provide employment to certain amount of people rather it should be judged on the basis of modern technology, and quality education provided to the poor and deprived people of society. Education, in this way, can turn the population into valuable and productive part of society.

\_

Education has been accepted as one major agency of socialization, and teachers and educational institutions as socializing agents. In describing education as an instrument of social change, three things are important: the agents of change, the content of change, and the social background of those who are sought to be changed, i.e. students. Educational institutions under the control of different cultural groups reflect the values of those groups which support and control education. In this situation, teachers impart specific values, aspirations and to the children. Social reformers, who were educated emphasized values like removal of caste restrictions, equality of women, doing away with social evil–social customs and practices, voice in the governance of the country, establishing democratic institutions and so on. They, thus, wanted to teach liberal philosophy through education for changing society. In other words they regarded education as a flame or light of knowledge which dispelled the darkness of ignorance. The use of education for spreading the values of modernization came to be emphasized from the 1960s and 1970s onwards. Highly productive economies, distributive justice, people’s participation in decision-making bodies, adoption of scientific technology in industry, agriculture and other occupations and professions were accepted as goals for modernizing the Indian society. And these goals were to be achieved through liberal education. Thus, modernization was not accepted as a philosophy or a movement based on rational values system but as a process that was to be confined only to economic field but was to be achieved in social, political, cultural and religious fields too. Education was sought to be utilized as channel for the spread of modernity According to the sociological perspective, education does not arise in response of the individual needs of the individual, but it arises out of the needs of the society of which the individual is a member. The educational system of any society is related to its total social system. It is a sub system performing certain functions for the on-going social system. The goals and needs of the total social system get reflected in the functions it lays down for educational system and the form in which it structures it to fulfil those functions. In a static society, the main function of the educational system is to transmit the cultural heritage to the new generations. But in a changing society, these keep on changing from generation to generation and the educational system in such a society must not only transmit the cultural heritage, but also aid in preparing the young for adjustment to any changes in them that may have occurred or are likely to occur in future. In contemporary societies, “The proportion of change that is either planned or issues from the secondary consequences of deliberate innovations is much higher than in former times.” This is more so in societies that has newly become independent and are in a developing stage. Consequently, in such modern complex societies, education is called upon to perform an additional function of becoming an agent of social change. Thus, the relationship between educational system and society is mutual; sometimes the society influences changes in educational system and at other times the educational system influences changes in the society. The role of education as an agent or instrument of social change and social development is widely recognized today. Social change may take place – when humans need change. When the existing social system or network of social institutions fails to meet the existing human needs and when new materials suggest better ways of meeting human needs. Education is seen as a major vector in society, but that it is largely allocated a conservative role, since its main function is in the socialization of the young and the maintenance of the social order. During times of rapid social change, such as the second half of the 20th century, the role of education in the service of the nation is emphasized. When things are going well, especially economically, more experimentation with education is supported, and more idealistic goals are pursued, such as equity of educational opportunity. It is in the ideological and moral spheres, however, that education is most clearly expected to play a leading role. Social change takes place as a response to many types of changes that take place in the social and nonsocial environment. Education can initiate social changes by bringing about a change in outlook and attitude of man. It can bring about a change in the pattern of social relationships and thereby it may cause social changes.

\_

Role of education in Social Change

1) Education perpetuates eternal values

2) Promotes capacity to welcome social change

3) Evaluation of social change

4) Transmission of culture

5) Removal of obstacles

6) Increasing the areas of knowledge

7) Leadership role

8) Mother of new changes

9) Spreading knowledge

10) Stabilizing democratic values

11) Control channelizes and modifies thoughts of new generation

12) School as a workshop for citizenship training

13) Awareness against social evils

14) National and international understanding

15) Equality among masses

16) Social Awakening

17) National Development

\_

Influence of Education on Family:

1. Improve home management

2. Recognition of worth of home

3. Production of educated elite

4. To discharge productive duties towards home

5. Family Planning

6. An efficient member of family

7. Social efficiency of family

8. Adjustability in family

9. Co-ordination of family and school

10. Education of parents

11. To maintain better homes

12. Cultivation of higher values

13. Propagates cooperation within and outside the home

14. Create liberal and wider attitude

15. Increasing productivity of family members

16. Optimizing Economic efficiency

\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_

Education vis-à-vis learning:

Education is what people do to you and learning is what you do to yourself…and what you need to learn is how to learn. Formal learning, normally delivered by trained teachers in a systematic intentional way within a school, academy/college/institute or university, is one of three forms of learning, the others being informal learning, which typically takes place naturally as part of some other activity, and non-formal learning, which includes everything else, such as sports instruction provided by non-trained educators without a formal curriculum.

\_

Traditional education focuses on teaching, not learning. It incorrectly assumes that for every ounce of teaching there is an ounce of learning by those who are taught. However, most of what we learn before, during, and after attending schools is learned without its being taught to us. A child learns such fundamental things as how to walk, talk, eat, dress, and so on without being taught these things. Adults learn most of what they use at work or at leisure while at work or leisure. Most of what is taught in classroom settings is forgotten, and much or what is remembered is irrelevant. In most schools, memorization is mistaken for learning. Most of what is remembered is remembered only for a short time, but then is quickly forgotten. Furthermore, even young children are aware of the fact that most of what is expected of them in school can better be done by computers, recording machines, cameras, and so on. They are treated as poor surrogates for such machines and instruments. Why should children — or adults, for that matter — be asked to do something computers and related equipment can do much better than they can? Why doesn’t education focus on what humans can do better than the machines and instruments they create? When those who have taught others are asked who in the classes learned most, virtually all of them say, “The teacher.” It is apparent to those who have taught that teaching is a better way to learn than being taught. Teaching enables the teacher to discover what one thinks about the subject being taught. Schools are upside down: Students should be teaching and faculty learning.

\_

Ways of Learning:

There are many different ways of learning; teaching is only one of them. We learn a great deal on our own, in independent study or play. We learn a great deal interacting with others informally — sharing what we are learning with others and vice versa. We learn a great deal by doing, through trial and error. Long before there were schools as we know them, there was apprenticeship — learning how to do something by trying it under the guidance of one who knows how. For example, one can learn more architecture by having to design and build one’s own house than by taking any number of courses on the subject. When physicians are asked whether they leaned more in classes or during their internship, without exception they answer, “Internship.” In the educational process, students should be offered a wide variety of ways to learn, among which they could choose or with which they could experiment. They do not have to learn different things the same way. They should learn at a very early stage of “schooling” that learning how to learn is largely their responsibility — with the help they seek but that is not imposed on them. The objective of education is learning, not teaching.

\_

Mass Education and learning:

Mass education was necessary

•To decide what skills and knowledge everyone has to have to be a productive citizen of a developed country in the industrial age

•To make sure the way this information is defined and standardized, to fit into the standardization required by the industrial culture

•To develop the means of describing and communicating the standardized information (textbooks, curricula)

•To train people to comprehend the standardized material and master the means of transmitting it (teacher training, pedagogy)

•To create places where the trainees (children) and the trainers (unfortunately called teachers, which gives them a status they do not deserve) can meet — so-called schools (again a term stolen from a much different milieu, endowing these new institutions with a dignity they also do not deserve)

•And, to provide the coercive backing necessary to carry out this major cultural and social upheaval

In keeping with all historic attempts to revolutionize the social order, the elite leaders who formulated the strategy, and those who implemented it, perverted the language, using terms that had attracted a great deal of respect in new ways that turned their meanings upside down, but helped make the new order palatable to a public that didn’t quite catch on. Every word — teacher, student, school, discipline, and so on — took on meanings diametrically opposed to what they had originally meant. Today, there are two worlds that use the word education with opposite meanings: one world consists of the schools and colleges (and even graduate schools) of our education complex, in which standardization prevails. In that world, an industrial training mega-structure strives to turn out identical replicas of a product called “people educated for the twenty-first century”; the second is the world of information, knowledge, and wisdom, in which the real population of the world resides when not incarcerated in schools. In that world, learning takes place like it always did, and teaching consists of imparting one’s wisdom, among other things, to voluntary listeners.

\_

Learning modalities:

There has been much interest in learning modalities and styles over the last two decades. The most commonly employed learning modalities are:

•Visual: learning based on observation and seeing what is being learned.

•Auditory: learning based on listening to instructions/information.

•Kinesthetic: learning based on movement, e.g. hands-on work and engaging in activities.

Other commonly employed modalities include musical, interpersonal, verbal, logical, and intrapersonal. Some theories propose that all individuals benefit from a variety of learning modalities, while others suggest that individuals may have preferred learning styles, learning more easily through visual or kinesthetic experiences. A consequence of the latter theory is that effective teaching should present a variety of teaching methods which cover all three learning modalities so that different students have equal opportunities to learn in a way that is effective for them. Guy Claxton has questioned the extent that learning styles such as Visual, Auditory and Kinesthetic(VAK) are helpful, particularly as they can have a tendency to label children and therefore restrict learning. Recent research has argued there is no adequate evidence base to justify incorporating learning styles assessments into general educational practice.

\_

Following are the most common ways of education:

•Lectures in which an instructor will explain the theory course;

•Instruction or tutorials where you work under supervision of a teacher or tutor on assignments, this is mostly for the mathematical subjects;

•Group projects in which you work together with your fellow students in groups;

•Design-based education (OGO) where you apply the theory in assignments;

•Video lectures are online representations of a live lecture.

\_\_\_

Teacher-Centered vs. Student-Centered Education:

When considering their approach to instruction, teachers are always looking for the method that is most beneficial for all of their students. Teachers want their students to enjoy the learning process, and they want the classroom to be orderly and controlled. As a result, the debate of teacher-centered vs. student-centered education has been in the forefront of educators’ minds for many years.

Teacher-centered education:

In teacher-centered education, students put all of their focus on the teacher. The teacher talks, while the students exclusively listen. During activities, students work alone, and collaboration is discouraged.

Pros

1. When education is teacher-centered, the classroom remains orderly. Students are quiet, and the teacher retains full control of the classroom and its activities.

2. Because students learn on their own, they learn to be independent and make their own decisions.

3. Because the teacher directs all classroom activities, they don’t have to worry that students will miss an important topic.

Cons

1. When students work alone, they don’t learn to collaborate with other students, and communication skills may suffer.

2. Teacher-centered instruction can get boring for students. Their minds may wander, and they may miss important facts.

3. Teacher-centered instruction doesn’t allow students to express themselves, ask questions and direct their own learning.

\_

Student-centered instruction:

When a classroom operates with student-centered instruction, students and instructors share the focus. Instead of listening to the teacher exclusively, students and teachers interact equally. Group work is encouraged, and students learn to collaborate and communicate with one another.

Pros

1. Students learn important communicative and collaborative skills through group work.

2. Students learn to direct their own learning, ask questions and complete tasks independently.

3. Students are more interested in learning activities when they can interact with one another and participate actively.

Cons

1. Because students are talking, classrooms are often busy, noisy and chaotic.

2. Teachers must attempt to manage all students’ activities at once, which can be difficult when students are working on different stages of the same project.

3. Because the teacher doesn’t deliver instruction to all students at once, some students may miss important facts.

4. Some students prefer to work alone, so group work can become problematic.

\_

When both approaches are used together, students can enjoy the positives of both types of education. Instead of getting bored with teacher-centered education or losing sight of their goals in a completely student-centered classroom, pupils can benefit from a well-balanced educational atmosphere.

\_\_

Advantages and Disadvantages of the Traditional Lecture Method:

Advantages:

•Gives the instructor the chance to expose students to unpublished or not readily available material.

•Allows the instructor to precisely determine the aims, content, organization, pace and direction of a presentation. In contrast, more student-centered methods, e.g., discussions or laboratories, require the instructor to deal with unanticipated student ideas, questions and comments.

•Can be used to arouse interest in a subject.

•Can complement and clarify text material.

•Complements certain individual learning preferences. Some students depend upon the structure provided by highly teacher-centered methods.

•Facilitates large-class communication.

Disadvantages:

•Places students in a passive rather than an active role, which hinders learning.

•Encourages one-way communication; therefore, the lecturer must make a conscious effort to become aware of student problems and student understanding of content without verbal feedback.

•Requires a considerable amount of unguided student time outside of the classroom to enable understanding and long-term retention of content. In contrast, interactive methods (discussion, problem-solving sessions) allow the instructor to influence students when they are actively working with the material.

•Requires the instructor to have or to learn effective writing and speaking skills.

\_

Knowledge, learning and education:

Knowledge is central to any discussion of learning and may be understood as the way in which individuals and societies apply meaning to experience. It can therefore be seen broadly as the information, understanding, skills, values and attitudes acquired through learning. As such, knowledge is linked inextricably to the cultural, social, environmental and institutional contexts in which it is created and reproduced. Learning is understood here to be the process of acquiring such knowledge. It is both a process and the result of that process; a means, as well as an end; an individual practice as well as a collective endeavour. Learning is a multifaceted reality defined by the context. What knowledge is acquired and why, where, when and how it is used represent fundamental questions for the development of individuals and societies alike. Education is understood here to mean learning that is deliberate, intentional, purposeful and organized. Formal and non-formal educational opportunities suppose a certain degree of institutionalization. A great deal of learning, however, is much less institutionalized, if at all, even when it is intentional and deliberate. Such informal education, less organized and structured than either formal or non-formal education, may include learning activities that occur in the work place (for instance, internships), in the local community and in daily life, on a self-directed, family-directed, or socially-directed basis. Finally, it is important to note that much of what we learn in life is neither deliberate nor intentional. This informal learning is inherent to all experiences of socialization.

\_

Being educated, being learned and being qualified:

Educated, learned and qualified are three such words that are completely different in their root and meaning and the information they convey, and yet, in popular mind, a person who has received a qualification in a certain subject is assumed to be learned and educated simply by virtue of having studied something. Qualified, in most cases, simply implies a formal recognition by some institution that the person concerned has been taught and as far as the institution can tell (through its limited examination systems) the person knows something of the subject. Educated on the other hand, implies exposure to, and absorption of, a fairly large spectrum of accumulated human learning. Such persons have at least a minimal understanding of subjects of formal education and a deep knowledge of some specific subject. A university can train you and qualify that you are competent in a specific subject. But it cannot qualify that you are educated. Good institutions attempt to educate their students and not just qualify them. In any case, formal education stops here and the best it can do is educate you. Being learned is surprisingly different from the other two. No one can ever certify that someone is learned. A learned person is a person who not only has knowledge and information, but distributes it freely and selflessly and is also sensitive to all life (humans, animals or plants) he or she interacts with. There are people who are barely literate, but who know their culture and tradition well, understood their roots and the need to follow customs properly. They may not have been formally engaged in debates, discussions and other methods of teaching, but even the most casual discussion with them would tell you that they knew who they were and why they needed to be the way they were. They were truly educated in their understanding and learned in the ways of implementing their ideals. But they were not qualified or formally educated. Otherwise, much of their mind and thinking may have been formalised and channelized so much so that we would not have been able to distinguish them from other zombies who come out of our educational system. Those who are involved in education formally or informally should probably realise that the goal of qualification is employability, the goal of being educated is creative thinking and the goal of the learned is to humanise society. We should therefore be able to somehow take this into account while designing education. Early education can focus on employability and providing minimalistic skills for simple professions, middle education on creativity and the highest education should focus on creativity and human values.

\_\_\_\_\_

Perception of learning:

The perception that learning has occurred may depend on the conception one holds of what learning is. A phenomenological perspective identified six different conceptions, which consider learning as: (1) increasing one’s knowledge, (2) memorizing and reproducing, (3) applying, (4) understanding, (5) seeing something in a different way, and (6) changing as a person. These conceptions reflect different dimensions of the learning process. An individual who believes that one of these dimensions of learning was achieved, particularly the dimension that matches his or her own conception of learning, will infer that learning has occurred. Phenomenographic studies resulted in defining the learning experience as a cognitive experience. It is thus suggested that when an individual feels that a change has occurred, that new knowledge has been acquired, or that some new understanding has been achieved, he or she relies on the cognitive source of the learning experience. However, learning is usually experienced or perceived as a complex event, which may rely on more than the cognitive experience. Human cognitive efforts are accompanied by a variety of metacognitive experiences, which provide experiential information. This information may be recalled when students are asked to assess their learning. The experiential information that operates in concert with the cognitive experience of learning constructs the affective source of the learning experience. Studies have shown that this affective source includes emotions, interests, opinions, attitudes, and values felt during the learning process. Caspi and Blau (2008) suggested that, in retrieving the experience of learning, one may rely on either the cognitive source or the affective source or both. Emotional experiences may be the learning itself but can also serve as an indirect route that forms the experience that learning, in the sense of cognitive change, occurs. Since informal learning is managed primarily by the learner, has a non-structured curriculum, and does not terminate with summative evaluation, there is no way to assess it other than by tracing the perception of learning. While it is relatively easy to examine learners’ achievements in formal learning, it is impossible to do so in informal learning. However, examining the perception of learning does not depend on the extent of formality of the learning, making this variable highly suitable for a comparison between the two learning environments. Moreover, the perception of learning focuses on the experiential aspects of learning.

\_\_\_\_

Marc Prensky (2000) argues that different learning outcomes are best learned through particular types of learning activities. Prensky asks not, “How do students learn?” but more specifically, “How do they learn what?”

Prensky postulates that, in general, we all learn:

• behaviors through imitation, feedback, and practice;

• creativity through playing;

• facts through association, drill, memory, and questions;

• judgment through reviewing cases, asking questions, making choices, and receiving feedback and coaching;

• language through imitation, practice, and immersion;

• observation through viewing examples and receiving feedback;

• procedures through imitation and practice;

• processes through system analysis, deconstruction, and practice;

• systems through discovering principles and undertaking graduated tasks;

• reasoning through puzzles, problems, and examples;

• skills (physical or mental) through imitation, feedback, continuous practice, and increasing challenge;

• speeches or performance roles through memorization, practice, and coaching;

• theories through logic, explanation, and questioning.

Prensky also argues that there are forms and styles of games that can be used, online or offline, to facilitate the learning of each of these skills

\_\_\_\_

Natural learning vs. teacher responsible learning:

Natural learning:

Natural learning is the way that humans learn since birth. Natural learners set their own objectives in response to needs, frustration, and curiosity. They find and engage in tasks that help them to learn and seek feedback to monitor their progress and improve their performance. In other words, natural learning is self-motivated and self-directed learning. Parents do not send their children to school to learn how to speak. How then do children learn to speak? The objective becomes obvious to children due to the frustration of being unable to communicate. Learning tasks allow for practice. Feedback is immediate and clear because adults love to help young learners. Applications of new knowledge are made so as to continue learning. Children take responsibility for all aspects of this “natural learning process.” Natural learning obviously works. Adults often use the natural learning process when they need to learn something that is important to them. For example, people have taught themselves to speak a new language, use computers, learn math, play chess, or to play a musical instrument. They set objectives and manage this process by seeking resources and help from others, engaging in active learning tasks, getting feedback from others, and practicing applications. The motivation is intrinsic. Natural learning obviously works.

Teacher responsible (centered) learning:

Under the approach used at the vast majority of universities, the teacher (or committees of teachers and administrators) are expected to decide what learning objectives are best for students, what learning tasks must be done and when, and what feedback students should be provided with. Unfortunately, objectives are seldom made explicit in universities, tasks are often of little interest to students, feedback focuses on content (facts) rather than skills, and application is seldom addressed. Motivation is based on extrinsic rewards and punishments in a competitive environment (Kohn 1986). The underlying message at universities is that learners are not responsible for their learning. This message from the education industry starts long before the university. Using a sample of 506 males (median age 10.5 years), half were randomly assigned to a five-year program that included tutoring in academic subjects and counselling, while the other half (the control group) received no services. In a 30- year follow-up, those from the treatment group were highly positive about the value of the program. But compared to the control group, they were more likely to have committed a crime or been alcoholic, died younger, been in occupations with lower prestige, and report that their work was not satisfying (McCord 1977). Might the teacher-centered approach foster a sense of helplessness about learning? The traditional teacher-responsible design for education in universities conflicts with what we know about how people learn. In contrast to natural learning, it substitutes teacher for learner responsibility. As it is based on extrinsic rewards, it undermines intrinsic interest in learning. Attempts to improve upon this approach would be expected to further diminish student responsibility and make things worse. Not surprisingly, then, the evidence shows a sharp decline in the effectiveness of universities since 1960. In other words, when doing the wrong thing, doing it “better” makes things worse. Adults know how to learn and they have known almost since birth. The call for natural learning wherein each person has control is consistent with evidence from other markets. Efforts to improve the efficiency of various outcomes by a third party’s use of extrinsic rewards have been counterproductive in all markets studied to date (Winston 2006). Instead of allowing people to spend money to educate themselves – or their friends, family, and employees –governments tax people and decide who should be educated, about what, and how. Organizations hire people for their certificates rather than for their ability to perform jobs. To reap the benefits of the learner-responsible education, it is not necessary to adopt all of the action steps. Instead, small pilot programs should be encouraged by universities. These would be low-risk changes for prestigious universities because they admit only a small percentage of their applicants.

\_\_\_\_\_\_\_

Incidental and Intentional learning:

Two other terms worth mentioning are incidental and intentional learning, which refers to the intent of the learning objectives. An intentional learning environment has a self-directed purpose in that it has goals and objectives on what and/or how to learn. Incidental learning occurs when the learner picks up on something else in the learning environment, such as the action of a model that causes him or her to lose focus on the learning objectives or goal and focus on an unplanned learning objective. Thus, formal learning is normally always intentional. Informal learning is intentional if the learner sets an objective or goal for herself and incidental if the learning occurs haphazardly or serendipity. While incidental learning is often dismissed by instructors, it is an important concept because it often has a motivating effect with the learners that lead to discovery learning (an unplanned learning episode, but proves to be quite useful). So unless other considerations prevent it, it can sometimes be worthwhile to detour from the primary objectives to take advantage of an unplanned teachable moment.

\_

The most basic distinction between different forms of education divides forms of learning that are intentional from those that are incidental. In intentional learning what the learner remembers is “the product of deliberate attempts to remember,” while in incidental learning there is no deliberate attempt to remember, rather, what the learner remembers is the “result of interaction with a relatively meaningful environment”. What counts here is the intention of the learner, rather than the teacher. Thus, a two-year-old girl’s familiarity with certain pieces of music, developed because her parents deliberately played these pieces to train her “ear,” would be considered an instance of incidental rather than intentional learning. (As this example illustrates, however, whether the learner recognizes the situation as one in which he or she is supposed to be learning can depend on environmental cues arranged by others.) Much of our ordinary knowledge of the world-that grass is green, dogs bark, and lunch precedes supper-is the result of incidental learning. The same is true of many of our skills, from learning customary rules of social exchange to speaking our native tongue. Although children do practice speech, most of what we know of the vocabulary, syntax, and phonetics of our native tongue was just “picked up” in incidental learning. Foreign language study in school, on the other hand, is a good example of intentional learning. With few exceptions, school learning is designed to be intentional learning. In this society school buildings and class period bells serve to mark a place and time for intentional learning. Although incidental learning takes place throughout life, it predominates over intentional learning in young children because it is some time before they fully develop the skills needed to learn deliberately. This is especially true if memorization is involved. Brown (1975) lists a number of studies that review the findings in this area. Children as old as eight or nine are still improving their skills in spontaneously elaborating and categorizing material to facilitate its acquisition and retrieval and even in recognizing when an extra effort will have to be made to learn something (Brown 1977). Under some circumstances even college students will do better on an incidental than an intentional recall task (Bransford et al. 1977). A distinction has to be made, however, between difficulty in applying the appropriate learning strategy spontaneously and inability to apply a strategy even under instruction – between production and mediation problems, in the current jargon. Long before children become efficient intentional learners on their own, they are capable of it with help. In other words, one factor affecting the effectiveness of intentional versus incidental learning is the cognitive development of the learner. Another is the nature of the leaner’s interaction with the material to be learned. A number of experiments have demonstrated that subjects in incidental recall tests perform at least as well as subjects instructed to remember the material, provided the task instructions lead the former to pay attention to the material and process it in a meaningful way. For example, preschool children asked only to classify pictures recalled them better than children instructed to remember the pictures. A final variable impinging on the effectiveness of incidental versus intentional learning is the nature of the material to be learned. According to Brown, “If a child engages in a meaningful activity or experiences a meaningful event, he will retain the essential features of that activity, whether or not a deliberate intention to remember has been evoked”. “Meaningful” is rarely defined in such discussions, but it is usually assumed that classifying an experimenter’s list of words is not a meaningful activity, while most of what one does outside of the experimental laboratory is meaningful. School subjects are more or less meaningful depending on whether their presentation leads the learner to relate the material to previous knowledge or treat it like the experimenter’s arbitrary word lists. Part of meaningfulness here is familiarity, because a familiar sequence or type of event can be partly reconstructed from memory of similar sequences or events. The well-known Chase and Simon (1973) test of chess players’ memory illustrates this principle. Chess masters shown an arbitrary arrangement of pieces on a board remembered their positions no better than weaker players did. When the masters were shown a possible middle-game arrangement, however, they remembered the positions of the pieces much better than weaker players did, because the positions represented configurations that could be labelled and then recalled or reconstructed as following from such-and-such an opening with x, y, and z variations (Chase and Simon 1973). There is a danger in reconstructing one’s memory of a specific event from memory of similar events, however: it is easy to forget idiosyncratic details of the particular event and to confuse it with the more familiar type. Spiro (1977) conducted an experiment that indicates that the likelihood of this occurring is especially great in incidental recall situations. Different groups of subjects heard about a couple planning to marry. All subjects were told that the man did not want children; for some subjects the woman reacted favorably, for others, she reacted unfavorably, to this news. Some subjects in each group were then told in an offhand manner that the couple were later happily married; others that the wedding was called off. Thus, some subjects heard a sequence that is not typical in real life (e.g., disagreement over whether to have children, followed by a happy marriage), while others heard a more familiar sequence (e.g., no disagreement over whether to have children, followed by a happy marriage). Furthermore, some of the subjects had been told they were participating in a memory test, while others were told only that the experimenters were interested in their reactions to social interaction situations. The latter (incidental) memory group made significantly more errors in recalling the unfamiliar version of the story after a delay than the subjects who deliberately memorized the unfamiliar version did. This difference between intentional and incidental groups was not found when they were recalling a familiar version of the story. Thus, intentional recall may be superior to incidental recall when idiosyncratic details need to be remembered. In sum, what does all of this show for the effectiveness of forms of education that rely on incidental versus intentional learning? Especially for young children, provided they are interested enough to attend to the matter in question and provided this material is meaningful for them, incidental learning appears to be at least as effective as intentional learning of a particular skill or subject matter. Whether it is more effective is not clear. The experiments in which subjects did better on incidental than on intentional memory tasks were those in which they were led to perform activities, such as imposing taxonomic classifications on words or objects, that they would not normally do in a real-life incidental learning situation. Spiro (1977), however, argues that instructions to memorize lead learners to compartmentalize the material to be learned instead of integrating it with their existing knowledge. He implies that in the long run compartmentalized material may be harder to retrieve than better integrated material. To the extent, then, that incidental learning leads to better integration than intentional learning, it may be more effective for long-term learning. Forms of education that lead to deliberate learning, on the other hand, appears to be necessary where the learner would not otherwise be motivated to attend to the material, or where verbatim recall or recall of events with idiosyncratic details is necessary. The importance of the learner’s motivation to attend to the material, by the way, illustrates that while “affective” and “cognitive” factors can be studied separately, in a given learning situation they are actually intertwined.

\_\_\_\_\_\_

Converting from passive to active learning:

There are many different forms of education and just as many different ways to categorize different forms of education. We have chosen a fairly simplistic three category scheme; formal education, self-guided education and public education. What we mean by formal education is the education provided through schools and universities. This form of education has historically been with students and teachers in classrooms. What we mean by self-guided education is sometimes known as ‘informal education’ and it is the education that people obtain through visits to parks, museums, aquaria and other means of obtaining information via signage, interpreters, rangers, docents, guides, etc. What we mean by public education is when the ‘student’ actively engages in learning through citizen science programs, participatory science and experimentation. In popular education, the lines between the ‘teacher’ and ‘student’ blur and learning occurs by both ‘teacher’ and ‘student’.

\_

Passive learning in which the teacher drones on in front of a classroom while students take notes or daydream is not particularly effective, particularly with regard to long-term retention of the material. The adage “see it and forget it”, “hear it and remember it”, and “do it and learn it” is appropriate regarding passive learning. In formal education, a way to convert passive learning into active learning is to invoke immersive education. In self-guided education, a way to convert passive learning into active learning is to convert individual viewing into an interactive experience, often with groups of people. In public education, a way to convert passive learning which can be through an awareness campaign is to develop citizen scientists. The focus is on getting people to become more engaged in the educational process. There is a role in society for each of these education modes (formal, self-guided, public). With low system complexity and low decision stakes, both formal and self-guided education can be fully adequate in their ability to convert uninformed or untrained people into informed and trained people. With increasing system complexity and increasing decision stakes, converting from passive to active learning becomes increasingly important, thus immersive and interactive education approaches are more relevant. In addition, public education really is needed to fully engage people in the educational process. In situations that are truly complex, but the decision stakes are not very high, ‘esoteric’ research can be employed in which basic principles can be derived through research projects but people’s lives are not directly or immediately affected. In simple systems with high decision stakes, it is the role of the political leaders to make decisions acceptable to the public.

\_

Learning pyramid:

The figure above shows that active learning leads to better retention of knowledge than passive learning.

\_\_\_\_\_

Two-Way Learning:

It means creating a classroom culture of reciprocity, where teachers and students are learners first. Katherine Merseth, a senior lecturer at the Harvard Graduate School of Education, creates a culture of reciprocity in her classroom, where students and instructors alike are expected to both teach and learn. “The two words are often interchanged because they are inextricably linked — learners need teachers, and teachers need learners,” Merseth says. Sharing responsibility for teaching and learning enhances instructor influence. Merseth encourages students to lead the discussion, promoting new perspective and understanding.

\_\_\_\_\_\_\_\_\_\_

Educational psychology:

Educational psychology is the study of how humans learn in educational settings, the effectiveness of educational interventions, the psychology of teaching, and the social psychology of schools as organizations. Although the terms “educational psychology” and “school psychology” are often used interchangeably, researchers and theorists are likely to be identified as educational psychologists, whereas practitioners in schools or school-related settings are identified as school psychologists. Educational psychology is concerned with the processes of educational attainment in the general population and in sub-populations such as gifted children and those with specific disabilities. Educational psychology can in part be understood through its relationship with other disciplines. It is informed primarily by psychology, bearing a relationship to that discipline analogous to the relationship between medicine and biology. Educational psychology in turn informs a wide range of specialties within educational studies, including instructional design, educational technology, curriculum development, organizational learning, special education and classroom management. Educational psychology both draws from and contributes to cognitive science and the learning sciences. In universities, departments of educational psychology are usually housed within faculties of education, possibly accounting for the lack of representation of educational psychology content in introductory psychology textbooks (Lucas, Blazek, & Raley, 2006).

\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_

Education systems and policies:

\_

Marxist and Functionalists views on education:

There are two main views on the role of education; the Marxist and Functionalists who take different approaches to this area. Interactionists have a view on this topic, but not an extremely controversial one, with large grounds for debate. Marxists see education as an unequal and corrupt system which recreates class inequality, whereas Functionalists take more positive views, arguing it prepares children for the world of work and helps them to develop their personal talents, discover who they are, and where they would best fit into societies workforce. The two views of Functionalists and Marxists represent to extreme views of conflicting opposites, Functionalists creating a very positive light, claiming that all is well with the education system and society, whereas Marxists have the negative view that it is all unequal and corrupt. What these views both fail to recognise is the Interactionists approach and that we do live in a meritocracy, and if you work hard you can achieve, as they focus so hard on macro issues, they don’t see people as individuals with individual choices, and so cannot claim to have a ‘blanket explanation’ for the world’s problems.

\_

Education System:

The term education system generally refers to public schooling, not private schooling, and more commonly to kindergarten through high school programs. Schools or school districts are typically the smallest recognized form of “education system” and countries are the largest. States are also considered to have education systems. Simply put, an education system comprises everything that goes into educating public-school students at the federal, state, or community levels. Education system includes

1. Laws, policies, and regulations

2. Public funding, resource allocations, and procedures for determining funding levels

3. State and district administrative offices, school facilities, and transportation vehicles

4. Human resources, staffing, contracts, compensation, and employee benefits

5. Books, computers, teaching resources, and other learning materials

6. And, of course, countless other contributing elements.

\_

The development and growth of national education systems:

One of the most significant phenomena of the 20th century was the dramatic expansion and extension of public (i.e., government-sponsored) education systems around the world—the number of schools grew, as did the number of children attending them. Similarly, the subjects taught in schools broadened from the basics of mathematics and language to include sciences and the arts. Various explanations have been given for the substantial increase in numbers of youths as well as adults attending government-sponsored schools; social scientists tend to categorize the reasons for these enrolment increases as products of either conflict or consensus in the process of social change. In most cases these perspectives are rooted in theories of social science that were formulated in the late 19th and early 20th centuries.

\_

Different countries have different education systems and for the sake of example, I will delineate Indian education system. The Indian education system is structured as follows:

\_

Types of Schools in India:

•Public/government schools: Most schools in India are funded and run by the government. However, the public education system faces serious challenges including a lack of adequate infrastructure, insufficient funding, a shortage of staff and scarce facilities

•Private schools: Since many government schools do not provide adequate education, Indian parents aspire to send their children to a private school. Some expats choose to send their children to private Indian schools

•International schools: There are international schools in all major cities. They are attended by expat and Indian children

•National open schools: Provide education up to the higher secondary level for children whose schooling have been interrupted and have been unable to complete formal education

•Special-needs schools: Provide non-formal education and vocational training to children with disabilities

\_\_\_\_\_

How the world’s most improved school systems keep getting better: A study:

How does a school system with poor performance become good? And how does one with good performance become excellent?

Authors analyzed twenty systems from around the world, all with improving but differing levels of performance, examining how each has achieved significant, sustained, and widespread gains in student outcomes, as measured by international and national assessments. Based on over 200 interviews with system stakeholders and analysis of some 600 interventions carried out by these systems—together comprising what they believe is the most comprehensive database of global school system reform ever assembled—this report identifies the reform elements that are replicable for school systems elsewhere as they move from poor to fair to good to great to excellent performance. The systems authors studied were: Armenia, Aspire (a US charter school system), Boston (Massachusetts), Chile, England, Ghana, Hong Kong, Jordan, Latvia, Lithuania, Long Beach (California), Madhya Pradesh (India), Minas Gerais (Brazil), Ontario (Canada), Poland, Saxony (Germany), Singapore, Slovenia, South Korea, and Western Cape (South Africa). While there is no single path to improving school system performance, the experiences of all the 20 improving school systems studied show that strong commonalities exist in the nature of their journeys.

1. A system can make significant gains from wherever it starts—and these gains can be achieved in six years or less.

2. There is too little focus on “process” in the debate today. Improving system performance ultimately comes down to improving the learning experience of students in their classrooms.

3. Each particular stage of the school system improvement journey is associated with a unique set of interventions. The research suggests all improving systems implement similar sets of interventions to move from one particular performance level to the next, irrespective of culture, geography, politics, or history. This suggests that systems would do well to learn from those at a similar stage of the journey, rather than from those that are at significantly different levels of performance. It also shows that systems cannot continue to improve by simply doing more of what brought them past success.

4. A system’s context might not determine what needs to be done, but it does determine how it is done. Though each performance stage is associated with a common set of interventions, there is substantial variation in how a system implements these interventions with regard to their sequence, timing, and roll-out—there is little or no evidence of a “one-size-fits-all” approach to reform implementation.

5. The research suggests that six interventions are common to all performance stages across the entire improvement journey: building the instructional skills of teachers and management skills of principals, assessing students, improving data systems, facilitating improvement through the introduction of policy documents and education laws, revising standards and curriculum, and ensuring an appropriate reward and remuneration structure for teachers and principals.

6. Systems further along the journey sustain improvement by balancing school autonomy with consistent teaching practice.

7. Leaders take advantage of changed circumstances to ignite reforms. By far, the most common event to spark the drive to reform is a change in leadership: every system authors studied relied upon the presence and energy of a new leader, either political or strategic, to jumpstart their reforms.

8. Leadership continuity is essential. Leadership is essential not only in sparking reform but in sustaining it.

\_\_\_\_\_

Theories of education:

Education theory seeks to know, understand and prescribe educational policy and practice. Education theory includes many topics, such as pedagogy, andragogy, curriculum, learning, and education policy, organization and leadership. Educational thought is informed by many disciplines, such as history, philosophy, sociology, and psychology. For example, a cultural theory of education considers how education occurs through the totality of culture, including prisons, households, and religious institutions as well as schools. Other examples are the behaviorist theory of education that comes from educational psychology and the functionalist theory of education that comes from sociology of education. The earliest known attempts to understand education in Europe were by classical Greek philosophers and sophists, but there is also evidence of contemporary (or even preceding) discussions among Arabic, Indian, and Chinese scholars.

\_

Interaction in education:

Although interaction has long been a defining and critical component of the educational process and context, it is surprisingly difficult to find a clear and precise definition of this concept in the education literature. In popular culture, the use of the term to describe everything from toasters to video games to holiday resorts further confuses precise definition. Wagner’s (1994) definition of interaction is “reciprocal events that require at least two objects and two actions. Interactions occur when these objects and events mutually influence one another”. Interaction (or interactivity) serves a variety of functions in the educational transaction. Sims (1999) has listed these functions as allowing for learner control, facilitating program adaptation based on learner input, allowing various forms of participation and communication, and acting as an aid to meaningful learning. In addition, interactivity is fundamental to creation of the learning communities espoused by Lipman (1991), Wenger (2001), and other influential educational theorists who focus on the critical role of community in learning. Finally, the value of another person’s perspective, usually gained through interaction, is a key learning component in constructivist learning theories (Jonassen, 1991), and in inducing mindfulness in learners (Langer, 1989). Garrison and Shale (1990) defined all forms of education (including that delivered at a distance) as essentially interactions between content, students, and teachers. Laurillard (1997) constructed a conversational model of learning in which interaction between students and teachers plays the critical role. As long ago as 1916, John Dewey referred to interaction as the defining component of the educational process that occurs when the student transforms the inert information passed to them from another, and constructs it into knowledge with personal application and value (Dewey, 1916). Thus, there is a long history of study and recognition of the critical role of interaction in supporting, and even defining, education.

\_\_\_\_\_

Education policy:

Education policy are the principles and government policy-making in educational sphere, as well as the collection of laws and rules that govern the operation of education systems. Education occurs in many forms for many purposes through many institutions. Examples include early childhood education, kindergarten through to 12th grade, two and four year colleges or universities, graduate and professional education, adult education and job training. Therefore, education policy can directly affect the education people engage in at all ages. Examples of areas subject to debate in education policy, specifically from the field of schools, include school size, class size, school choice, school privatization, tracking, teacher education and certification, teacher pay, teaching methods, curricular content, graduation requirements, school infrastructure investment, and the values that schools are expected to uphold and model. Issues in education policy also address problems within higher education. Education policy analysis is the scholarly study of education policy. It seeks to answer questions about the purpose of education, the objectives (societal and personal) that it is designed to attain, the methods for attaining them and the tools for measuring their success or failure. Research intended to inform education policy is carried out in a wide variety of institutions and in many academic disciplines.

\_\_\_\_\_\_\_

Best Education in the World:

The United States places 17th in the developed world for education, according to a global report by education firm Pearson in 2013. Finland and South Korea, not surprisingly, top the list of 40 developed countries with the best education systems. Hong Kong, Japan and Singapore follow. Finland, which was previously in first place, has slumped to fifth place in 2014. The rankings are calculated based on various measures, including international test scores, graduation rates between 2006 and 2010, and the prevalence of higher education seekers. The high ranking countries tend to offer teachers higher status in society and have a “culture” of education. The study notes that while funding is an important factor in strong education systems, cultures supportive of learning is even more critical — as evidenced by the highly ranked Asian countries, where education is highly valued and parents have grand expectation. The report shows a strong link between improving levels of education and training and economic growth. While Finland and South Korea differ greatly in methods of teaching and learning, they hold the top spots because of a shared social belief in the importance of education and its “underlying moral purpose.” The study aims to help policymakers and school leaders identify key factors that lead to successful educational outcomes. The research draws on literacy data as well as figures in government spending on education, school entrance age, teacher salaries and degree of school choice. Researchers also measured socioeconomic outcomes like national unemployment rates, GDP, life expectancy and prison population. The report also notes the importance of high-quality teachers and improving strong educator recruitment. The rankings show, however, that there is no clear correlation between higher pay and better performance. The bottom line findings:

1. There are no magic bullets: The small number of correlations found in the study shows the poverty of simplistic solutions. Throwing money at education by itself rarely produces results, and individual changes to education systems, however sensible, rarely do much on their own. Education requires long-term, coherent and focussed system-wide attention to achieve improvement.

2. Respect teachers: Good teachers are essential to high-quality education. Finding and retaining them is not necessarily a question of high pay. Instead, teachers need to be treated as the valuable professionals they are, not as technicians in a huge, educational machine.

3. Culture can be changed: The cultural assumptions and values surrounding an education system do more to support or undermine it than the system can do on its own. Using the positive elements of this culture and, where necessary, seeking to change the negative ones, are important to promoting successful outcomes.

4. Parents are neither impediments to nor saviours of education: Parents want their children to have a good education; pressure from them for change should not be seen as a sign of hostility but as an indication of something possibly amiss in provision. On the other hand, parental input and choice do not constitute a panacea. Education systems should strive to keep parents informed and work with them.

5. Educate for the future, not just the present: Many of today’s job titles, and the skills needed to fill them, simply did not exist 20 years ago. Education systems need to consider what skills today’s students will need in future and teach accordingly.

\_

America’s average ranking doesn’t come as a surprise. A report recently published by Harvard University’s Program on Education Policy and Governance found that students in Latvia, Chile and Brazil are making gains in academics three times faster than American students, while those in Portugal, Hong Kong, Germany, Poland, Liechtenstein, Slovenia, Colombia and Lithuania are improving at twice the rate. Researchers estimate that gains made by students in those 11 countries equate to about two years of learning. Chief Inspector of Schools UK Sir Michael Wilshaw suggests that other nations, such as Germany and Switzerland, have more flexible education systems that meet the needs of both students and their economies, and as a result they have lower youth unemployment levels than the UK.

\_

Finland and South Korea:

Fifty years ago, both South Korea and Finland had terrible education systems. Finland was at risk of becoming the economic stepchild of Europe. South Korea was ravaged by civil war. Yet over the past half century, both South Korea and Finland have turned their schools around — and now both countries are hailed internationally for their extremely high educational outcomes. What can other countries learn from these two successful, but diametrically opposed, educational models? Finland and South Korea have topped an international league table of education systems – despite taking very different approaches to learning. Finnish schools emphasise trust and students there do the fewest hours in class per week of the developed world. By contrast, South Korean children can spend 12 hours a day studying.

\_

Finish model:

According to the Programme for International Student Assessment (PISA) of the Organisation for Economic

Co-operation and Development (OECD), Finland is one of the countries with the best achievement scores in reading, mathematics and science for 15-year-olds. While this success could be attributed to many factors, it is largely due to Finland’s highly trained, professional and respected teachers. In Finland, teaching is a prestigious career and the Finnish society puts trust in education and teachers. They are highly qualified (requiring at least a Master’s degree for full time employment) and job selection is a rigorous process with only the best candidates chosen for teacher training. Teachers have high competence in content knowledge and pedagogy, and are autonomous and reflective academic experts. The Finnish model, say educators, is utopia. Finland has a short school day rich with school-sponsored extra-curricular, because Finns believe important learning happens outside the classroom. In Finland, school is the center of the community. School provides not just educational services, but social services. Education is about creating identity. Finnish culture values intrinsic motivation and the pursuit of personal interest. Finland, one of the leading educational hotspots in the world, is embarking on one of the most radical overhauls in modern education. By 2020, the country plans to phase out teaching individual subjects such as maths, chemistry and physics, and instead teaches students by ‘topics’ or broad phenomena, so that there’s no more question about “what’s the point of learning this?” What does that mean exactly? Basically, instead of having an hour of geography followed by an hour of history, students will now spend, say, two hours learning about the European Union, which covers languages, economics, history and geography. Or students who are taking a vocational course might study ‘cafeteria services’, which would involve learning maths, languages and communication skills. So although students will still learn all the important scientific theories, they’ll be finding out about them in a more applied way, which actually sounds pretty awesome.

\_

The Korean model:

Among these countries, South Korea stands apart as the most extreme, and arguably, most successful. The Koreans have achieved a remarkable feat: the country is 100 percent literate, and at the forefront of international comparative tests of achievement, including tests of critical thinking and analysis. But this success comes with a price: Students are under enormous, unrelenting pressure to perform. Talent is not a consideration — because the culture believes in hard work and diligence above all, there is no excuse for failure. Children study year-round, both in-school and with tutors. If you study hard enough, you can be smart enough. In Korea, the goal is for the teacher to lead the class as a community, and for peer relationships to develop. In American preschools, the focus for teachers is on developing individual relationships with students, and intervening regularly in peer relationships.

\_\_\_\_\_\_

Resources and education:

A large body of empirical evidence on the effects of resources on student achievement already exists. It shows that, at given spending levels, an increase in resources does not generally raise educational performance. Studies summarized by Eric Hanushek of the Hoover Institution have shown the lack of a strong, systematic relationship between resources and performance within the United States, within developing countries, and among countries. Likewise, studies at the Kiel Institute of World Economics have found no systematic relationship between resources and performance across time within most countries in the Organization for Economic Cooperation and Development (OECD) and within some countries in East Asia. Data from the Third International Mathematics and Science Study (TIMSS) again show that differences from country to country in per-pupil spending do not help in understanding differences in educational performance. The simple correlation between spending per student and average TIMSS test scores is 0.13 in primary school and 0.16 in middle school, on a scale where 1.0 denotes an absolute positive correlation between the two variables and 0 signals no correlation. This means that school productivity, the ratio of educational performance to the level of spending, differs widely across schooling systems. For education policy, the results of this study suggest that the crucial question is not one of providing more resources but of improving the institutional environment in which schools function. Spending more money within an institutional system that sets poor incentives will not improve student performance. An institutional system in which all the people involved have an incentive to improve student performance is the only alternative that promises positive effects. For decades politicians and researchers have argued about whether money makes a difference in education. Only few studies have shown more funding does not improve educational outcomes; however more than 60 studies show it does. Money isn’t everything in education, but there is clear evidence it improves student achievement and reduces disadvantage. In a later synthesis of some 60 studies, the University of Chicago researchers confirmed their previous finding that increases in expenditure has a significant positive impact on student achievement. Other extensive reviews of the academic literature have also found a positive relationship between funding and school outcomes. Many more recent studies have reached the same conclusion. They include studies on several US states, including repeated studies of school finance reform in Michigan and Massachusetts, and several UK studies. The effect is small in some studies, while in others it is larger; in some the effect is larger in primary schools than secondary schools; in some additional funding appears to matter more for some students than others; and in others some forms of expenditure have a greater effect than others. There have also been a number of cross-country studies on the relationship between school funding and international test scores. These have produced mixed results, with some finding increased funding leads to improvements in student results and others finding a weak relationship. There is even more evidence that money matters in reducing education disadvantage. Many studies in the US and Europe have found increased school funding for disadvantaged students leads to better school results. Findings from the Organisation for Economic Co-operation and Development’s PISA studies show the most successful education systems target resources to disadvantaged students. Even studies that found a weak impact of funding increases on general student outcomes have found much larger effects on the outcomes of disadvantaged students. Some show that the effect for disadvantaged students is two to four times that for other students. Clearly, those who claim increasing expenditure on schools makes no difference to student results have not fully read the research, but rely on a few, selective and misleading studies. One of the most comprehensive recent analyses of the relationship between school resources and outcomes stated: The conclusion that money doesn’t matter is not correct, and fiscal conservatives and opponents of fiscal equalisation should not take comfort from the complexities of an improved approach to school resources. However, while money matters in education it is also generally acknowledged that how it is spent is just as important. How resources are allocated is just as important as the amount of resources available. Rather than continue to debate whether money makes a difference, the focus should be on better understanding the ways in which money and other school resources can be brought to bear most effectively to improve results for disadvantaged students. Rutgers University professor Bruce Baker concludes that, despite recent rhetoric, “on average, aggregate measures of per-pupil spending are positively associated with improved or higher student outcomes,” while “schooling resources which cost money, including class size reduction or higher teacher salaries, are positively associated with student outcomes.” Finally, reviewing the high-quality evidence on the effect of school finance reforms, he asserts: “Sustained improvements to the level and distribution of funding across local public school districts can lead to improvements in the level and distribution of student outcomes.”

\_\_\_\_\_

Free education:

Free education refers to education that is funded through taxation or charitable organizations rather than tuition funding. Primary school and other comprehensive or compulsory education is free in many countries, for example, all education is mostly free (often not including books (from primary) and a number of administrative and sundry fees in university) including post-graduate studies in the Nordic countries. The Article 13 of International Covenant on Economic, Social and Cultural Rights ensures the right to free education at primary education and progressive introduction of it at secondary and higher education as the right to education. Elsewhere, free education usually comes to students in the form of scholarships and grants, if they cover all or most of students’ expenses. Individuals, institutions and advocacy initiatives are examples of providers of grants and scholarships. They may have economic (e.g. tax-deductibility), humanitarian, charitable or religious motivations.

\_

Should education be free?

Everyone deserves to be educated. Education should be accessible to everyone. It’s sad that intelligent people drop out because they can’t afford to take another loan or because books got too expensive. According to OECD (Organisation of Economic Co-operation and Development), country with a free education has a higher tax than the country who doesn’t give free education. We all know that the facilities that are needed in school especially higher education are expensive. So if the government lacks money of course they will charge the citizen higher taxes. But an educated citizen is a productive citizen and therefore able to pay more taxes. The claim that free education promotes mediocrity is not true simply because you have access to free education doesn’t mean you will be able to easily graduate. On the other hand, when the marginal cost of something is zero, the quantity demanded will be infinite and consequently quality will be meagre. Take a look at French experience. France provides free and pretty much unlimited access to universities for all with a high school diploma. With a few exceptions, the results are overcrowded, poorly equipped facilities providing low quality education. The poor state of most universities has led to a duel system whereby nearly all the bright students go not to the universities but to the highly competitive grandes ecoles (specialized colleges for very smart kids). Most university graduates find it very difficult to get a job.

\_

Free education on the Internet:

Online education has become an option in recent years, particularly with the development of free MOOCs (massive open online courses) from providers such as Khan Academy (High School) and Higher Education, through providers such as Udacity, Free University of Nigeria (FUN), World Education University (WEU) and Coursera. Free education has become available through several websites with some resembling the courses of study of accredited universities. Online education faces barriers such as institutional adoption, license or copyright restrictions, incompatibility and educator awareness of available resources. Due to the extensive requirements of resources for online education, many open community projects have been initiated. Specifically, the Wikimedia Foundation has developed a project devoted to free online educational resources, Wikiversity, and recently, several other sites for specific topics have developed. MyMCAT was designed as a free community project to aid students wishing to take the MCAT.

\_

Why Public Higher Education should be Free: How to decrease Cost and increase Quality at American Universities:

By Robert Samuels (Author):

Robert Samuels, a prolific blogger on the subject of higher education, seeks to convince his readers of the disconnect between the cost of tuition and the quality of instruction and, furthermore, that a high-quality combination of research and instruction could be maintained without the need for tuition at all. He explains how a large portion of tuition dollars go toward administration costs, research, non-educational programs (e.g., athletics, recreational extras and technology.) Samuels also points out that many universities are making risky investments and borrowing large sums to fund construction of new facilities that do not necessarily enhance learning and to increase compensation to already highly paid faculty and administrators. He argues that if current government funding to higher education were used more effectively, public institutions could be tuition free. Samuels presents a thought-provoking case for reform, and his book will appeal to anyone concerned with the current and/or future state of higher education in the United States.

\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_

Types of schools:

\_

School:

A school is an institution designed for the teaching of students (or “pupils”) under the direction of teachers. Most countries have systems of formal education, which is commonly compulsory. In these systems, students progress through a series of schools. The names for these schools vary by country but generally include primary school for young children and secondary school for teenagers who have completed primary education. An institution where higher education is taught is commonly called a university college or university. In addition to these core schools, students in a given country may also attend schools before and after primary and secondary education. Kindergarten or pre-school provide some schooling to very young children (typically ages 3–5). University, vocational school, college or seminary may be available after secondary school. A school may also be dedicated to one particular field, such as a school of economics or a school of dance. Alternative schools may provide non-traditional curriculum and methods. There are also non-government schools, called private schools. Private schools may be required when the government does not supply adequate, or special education. Other private schools can also be religious, such as Christian schools, hawzas, yeshivas, and others; or schools that have a higher standard of education or seek to foster other personal achievements. Schools for adults include institutions of corporate training, Military education & training and business schools. In homeschooling and online schools, teaching and learning take place outside of a traditional school building. At the individual level, it is important for schools help students to learn how to learn and help teachers to learn how to teach. Also, facilitating teachers’ professional development is one of the key education functions at this level. Performance indicators have been identified in order to ascertain the school environment is efficient and effective.

\_\_

When designing a school, factors that need to be decided include:

•Goals: What is the purpose of education, and what is the school’s role?

•Governance: Who will make which decisions?

•Parent involvement: In which ways are parents welcome at the school?

•Student body: Will it be, for example, a neighbourhood school or a specialty school?

•Student conduct: What behaviour is acceptable, and what happens when behaviour is inappropriate?

•Curriculum: What will be the curriculum model, and who will decide on curricula?

\_\_\_\_

School uniform:

A school uniform is a uniform worn by students primarily for a school or otherwise educational institution. They are common in primary and secondary schools in various countries. Although often used interchangeably, there is an important distinction between dress codes and school uniforms: according to scholars such as Nathan Joseph, clothing can only be considered a uniform when it “(a) serves as a group emblem, (b) certifies an institution’s legitimacy by revealing individual’s relative positions and (c) suppresses individuality.” A dress code, on the other hand, is much less restrictive, and focuses “on promoting modesty and discouraging anti-social fashion statements,” according to Marian Wilde. Examples of a dress code would be not allowing ripped clothing, no logos or limiting the amount of skin that can be shown.

\_

Effect of uniform on students:

Advocates of uniforms have proposed multiple reasons supporting their implementation and claiming their success in schools. A variety of these claims have research supporting them. Some of these pros include the following:

Advocates believe that uniforms affect student safety by:

•Lowering student victimization

•Decrease gang activity and fights

•Differentiating strangers from students in school buildings

For example, in the first year of the mandatory uniform policy in Long Beach, California, officials reported that fighting in schools decreased by more than 50%, assault and battery by 34%, sex offenses by 74%, and robbery by 66%. Advocates also believe that uniforms increase student learning and positive attitudes toward school through:

•Enhanced learning environments

•Heightened school pride

•Increased student achievement

•High levels of preparedness

•Conformity to organizational goals

•Increased chance of staying in school

•Increased commitment to learning

•Increased use of school setting to the student’s advantage

Wearing uniforms leads to decreased behavior problems by increasing attendance rates, lowering suspension rates, and decreasing substance use among the student body. Proponents also attribute positive psychological outcomes like increased self-esteem, increased spirit, and reinforced feelings of oneness among students to wearing uniforms. Additional proponent arguments include that school uniforms:

•Encourage discipline

•Help students resist peer pressure to buy trendy clothes

•Diminish economic and social barriers between students

Currently pros of school uniforms center around how uniforms impact schools’ environments. Proponents have found a significant positive impact on school climate, safety, and students’ self-perception from the implementation of uniforms.

\_

The Brunsma et al. examined how a school uniform affects attendance, behavior problems, substance abuse, and academic achievement. In this very well-known study, researchers tested the following hypotheses:

•Student uniforms decrease substance use;

•Student uniforms decrease behavioural problems;

•Student uniforms increase attendance;

•Student uniforms increase academic achievement.

Researchers in this study expected that the direct effects of uniforms on these outcomes would disappear once the moderating variables were introduced to the equation. If this were to be the case, then arguments proclaiming uniform policies’ direct effect on said outcomes would be proven false. This study used a nationally representative sample of students. From the results, researchers were able to conclude that students wearing uniforms did not have any significant difference in academic preparedness or proschool attitudes than other students. Researchers also found that student uniforms were not significantly correlated with school commitment variables such as truancy, behaviour, or drug abuse. In terms of the original four hypotheses researchers found that:

•Student uniforms were not an effective deterrent to decrease truancy;

•Student uniforms did not decrease behavior problems;

•Student uniforms did not decrease substance use;

•Student uniforms did not increase student achievement.

Because the four hypotheses were not supported, researchers were able to conclude that implementing uniform policies at high school level does not create the desired outcomes, as all four of the original hypotheses were derived from public discourse surrounding the uniform debate. In fact, Brunsma et al., 1998 found that uniforms had a significant negative effect on achievement, as students who wore uniforms and had high proschool attitudes actually had worse behavior problems than all other students. Researchers in this study suggested that “instead of directly affecting specific outcomes, uniforms act as a catalyst for change and provide a highly visible opportunity for additional programs” within schools.

\_\_\_\_\_\_

Text-books:

Text-book is a book used as a standard work for the study of a particular subject. Text-books that are intended to be used should be useful for the students as well as teachers. They should be so designed that on the one hand they may be written accord­ing to the psychological requirements of the students and on the other they should serve the purpose of the teacher who wish to impart knowledge to the students in a successful and interesting manner. There has always been an unending debate on the content of textbooks used in public schools, especially from the viewpoint of Creationism vs. Evolution. There are numerous cases where parents have reached courtrooms just because the textbooks of their children questioned their religious/scientific beliefs. While there have been endless efforts to bring about a balance in the texts included in the school curriculum, because the two aspects (religion and science) are bound to be contradictory to each other, the controversy remains to be very much around.

\_\_\_\_\_\_

Public school:

Public schools are schools that are provided by state and federal funding. Ninety percent of the children today in America attend public school. Private schools include both parochial schools and non-parochial schools. According to a special report published by the National Center for Education Statistics (NCES) in 2002, in 1999–2000, approximately 27,000 private schools accounted for 24 percent of all schools in the US and 12 percent of all full-time-equivalent teachers. Clearly, there are many more public schools that provide education to American students than their private counterparts.

\_

Private schools:

The term “private school” may conjure images of expensive, high-class, college preparatory boarding schools, and such institutions do exist. Most private schools in the United States, however, are small, modest operations with limited facilities. While there are secular private schools, the overwhelming majority are affiliated with religious institutions. Some private schools are part of a large, well-organized structure such as Catholic or Lutheran schools; others are small, independent operations tied only to a local church. Typically, schools associated with denominational structures (for example, Catholic schools) are more predictable than independent schools, whose curriculum, accreditation, and academic oversight may vary widely. Private schools are governed by their own set of rules. These rules may be established by a local board or may be imposed from the national organization or denomination. It is sometimes difficult to tell which set of operational rules — national or local — hold the advantage. On one hand, local control means nimble response to the community need; on the other hand, association with strong national organizations ensures that the school is meeting standards set for it by the national body.

\_

Usually when considering private versus public school, parents will have one or more factors that concern them. When looking at public or private schools, the following factors come into play:

\* Academic reputation and college preparation

\* School size and class size

\* Safety reputation

\* Special programs

\* Costs

\* Religious and moral instruction

\* Location

\* Ideology

\_

Public vs. Private Schools:

A private school is autonomous and generates its own funding through various sources like student tuition, private grants and endowments. A public school is government funded and all students attend free of cost. Because of funding from several sources, private schools may teach above and beyond the standard curriculum, may cater to a specific kind of students (gifted, special needs, specific religion/language) or have an alternative curriculum like art, drama, technology etc. Public schools have to adhere to the curriculum charted out by the district, and cannot deny admission to any child within the residential school zone. There are several preconceived notions regarding private and public schools. Private schools are often assumed to be very expensive, elitist and a better bet for admission to good colleges. Public schools are often thought of as shoddy, less disciplined and low-grade curriculum. This comparison offers a fair insight into both schools for parents to make an informed decision.

\_

Private Schools Public Schools

Tuition to enrol No tuition to enrol

Funded independently through tuition, grants, alumni, and community Funded via government and taxes

Does not necessarily have regulations Must follow regulations

Teachers don’t necessarily have to be certified Teachers must be state certified or working toward it

Flexibility with curriculum Not much flexibility with curriculum

Smaller classes Larger classes

May not have special education programs Have special education programs

\_\_\_

The figure below shows that public opinion about private school is better than public school:

\_\_\_

Any serious discussion of the public vs. private school issue has to consider following factors:

Facilities:

Many public school facilities are impressive; others are mediocre. The same is true of private schools. In the public school system, the twin engines of political support and economic revenue base are critical. In private schools the ability to attract endowments and other forms of financial support are just as critical. Private school facilities reflect the success of the school’s development team and that of the school to continue to generate alumni support. Some private K-12 schools have facilities and amenities which surpass those found at many colleges and universities. Hotchkiss and Andover, for example, have libraries and athletic facilities on a par with those at Brown and Cornell. They also offer academic and sports programs which make full use of all those resources. It is hard to find comparable facilities in the public sector. They are few and far between. Public schools also reflect the economic realities of their location. Wealthy suburban schools will have more amenities than inner city schools as a rule.

School Size:

Public schools are, on average, at least twice the size of private schools, according to US Department of Education Data. School size usually correlates to the population density of the local area. The average private school had 193 students in 1999–2000. The average public school had 535 students in the same area. Another way to look at this is to see that 80 percent of private schools have less than 300 students enrolled while only 29 percent of public schools have less than 300 students enrolled. While smaller school size may be correlated to a more controlled academic setting, the flip side is that there is strength in numbers. Small schools, have some disadvantages as well such as providing a narrower set of programs and services. The smallest high schools may not be able to offer advanced courses because they have too few students, a shortage of qualified teachers, or both.

Class Size:

Average class size in public schools is larger than in private schools. Many states recognize the value of small classes and have provided funding to keep class sizes small in grades K-3. As students become older, class size tends to get bigger in public schools, especially in large school districts and urban schools. On average, private schools have smaller average class sizes and lower student/teacher ratios than public schools. One of the key points of private education is individual attention. You need student to teacher ratios of 15:1 or better to achieve that goal of individual attention. On the other hand a public system has to take almost anyone who lives within its boundaries. In public schools you will generally find much larger class sizes, sometimes exceeding 35-40 students in some inner city schools. At that point teaching rapidly degenerates into babysitting.

Quality of teachers:

Public sector teachers are generally better paid. Private school compensation tends to be somewhat lower than public. Both public and private schools require their teachers to be credentialed. This usually means a degree and a teaching certificate. Teachers in public schools are state certified, which means that they have gone through the training required by the state including student teaching and coursework. They are required to hold college degrees and to be licensed by the state. Public schools cannot terminate the terms of their teachers abruptly. After completing a probationary period, teachers are granted tenure by law. They cannot be dismissed without first going through a twelve-month rehabilitation period. This too, can only be done after a public hearing in which charges of incompetence or misconduct must be proven. On the other hand, private school teachers may not be required to have certification, and often have subject area expertise and a degree in the subject they teach. Private schools have their own personnel requirements. Private schools can terminate the terms of their teachers abruptly. Schools are free to deal with personnel matters.

\_

Teacher’s Impact and Perception:

For most teaching practices—selecting teaching techniques, evaluating and grading students, disciplining students, choosing course content and skills to teach, and selecting textbooks and materials—private school teachers were more likely than public school teachers to report having a lot of influence on school policymaking. In four areas of school policy linked closely with teaching—establishing curriculum, setting student performance standards, setting discipline policy, and evaluating teachers—the sector differences were substantial. For example, 68 percent of private school teachers said they had a lot of influence on establishing curriculum, compared with 44 percent of public school teachers. In addition, private school teachers were more likely than public school teachers to say that they had a lot of influence on setting student performance standards (63 versus 38 percent) and on student discipline policy (48 versus 30 percent). It is of the opinion of some that high standards and consistent discipline promote an atmosphere for learning. Private schools succeed in offering discipline in every endeavor; public schools are challenged to offer discipline, with the same consistency. Some feel discipline can be for many students a critical part of the three way partnership in education. Some are of the opinion that this is a major reason why private school students are generally so successful in later life.

Religious affiliation:

Not all but many private schools have a religious affiliation. Public schools are not affiliated with a religion. In a study of private schools, seventy-nine percent of all private schools were found to have a religious affiliation. Thirty percent were affiliated with the Roman Catholic Church and 49 percent with other religious groups. The remaining 22 percent were non-sectarian. Although Catholic schools accounted for 30 percent of the total number of private schools, they enrolled 48 percent of all private school students. Public schools do not have a religious affiliation.

Obligations:

Public schools are obligated by law to educate all children, so to enrol in a public school you simply register your child by filling out the necessary forms. Public schools must accept any resident student who applies for admission, regardless of sex, race, religious affiliation, economic status or physical or mental handicap. Public schools must also meet state graduation requirements, which vary state by state. Public schools can expel children if their behavior is too disruptive; but the public school system will usually have in place an alternative school that the child will attend until they are no longer under the care of the public (18 years of age). Private schools are not obligated by any laws regarding admission. Therefore, private school admission is competitive. Also, private schools are not required to provide educational programs for children with special needs. Private schools are also under no obligation to keep a student enrolled. If a child’s behavior disrupts the school’s milieu, they can expelled. Another scenario to keep in mind is that if a child’s academic progress is not acceptable, they may be expelled out as well. Graduation requirements for private schools are decided by each school and are not subject to any state requirements. Many private schools do choose to align themselves with private school associations which will mandate graduation requirements.

Administrative Support:

The bigger the bureaucracy, the harder it is to get decisions made at all, much less get them made quickly. The public education system is notorious for having antiquated work rules and bloated bureaucracies. This is as a result of union contracts and host of political considerations. Private schools on the other hand generally have a lean management structure. Every dollar spent has to come from operating income and endowment income. Those resources are finite. The other difference is that private schools rarely have teacher unions to deal with.

\_

Quality of education:

The figure below shows that student performance and achievement is better in private school than public school in one study:

\_

Private school gives pupils a boost worth two extra years of education, a study shows:

The study by Durham University – the most sophisticated of its type to date – found that independent school pupils in England gained an advantage worth nearly two-thirds of a GCSE grade higher once the effects of income, gender and prior attainment were stripped out. “This difference equates to a gain of about two years’ normal progress and suggests that attending an independent school is associated with the equivalent of two additional years of schooling by the age of 16,” the research says. Some critics of private schools have attributed their academic success to the advantages of wealth and background among families who can afford the fees, which average around £12,000 a year to attend as a day pupil and £30,000 for boarding. The Durham researchers say they can’t explain the reason for the difference but the most obvious contender is the overall quality of teaching and learning, linked to a holistic education through which each child develops the confidence to do well.

\_

While it has long been held that private schools provide better education than public schools, current research suggests that is not the case. Public school students test higher, on average, in math than do private school students when social and economic backgrounds are controlled. Longitudinal data illustrates that, while students beginning in public and Catholic schools test at about the same level in math, by the fifth grade the public school students make significantly greater gains, equivalent to almost an extra half year of schooling.

\_

Private school students have no academic edge over students in the public system: a study:

Australian researchers have confirmed a growing body of international research that finds the high cost of private school education does not give students an academic edge over their public school counterparts. The study, which has been published in the Australian Journal of Labour Economics, found that once the more privileged backgrounds of private school students are taken into account, they fare no better in the education system than other children. The research from the University of Queensland, the University of Southern Queensland and Curtin University examined the vexed issue facing many parents when choosing between a public or private education for their children. Co-author of the study, Professor Luke Connelly, said primary students do just as well academically in either system.

\_\_\_\_\_

Charter Schools:

Charter schools are publicly funded elementary or secondary schools in the United States that have been freed from some of the rules, regulations, and statutes that apply to other public schools in exchange for some type of accountability for producing certain results, which are set forth in each school’s charter. Their founders are often teachers, parents, or activists who feel restricted by traditional public schools. The basic concept of charter schools is that they exercise increased autonomy in return for greater accountability.

\_\_\_\_\_

Boarding school:

A boarding school is a school in which most or all of the students live during the part of the year that they go to lessons. The word ‘boarding’ is used in the sense of “bed and board,” i.e., lodging and meals. Some boarding schools also have day students who attend the institution by day and return off-campus to their families in the evenings. Many independent (private) schools are boarding schools. Boarding school pupils (a.k.a. “boarders”) normally return home during the school holidays and often weekends, but in some cultures may spend the majority of their childhood and adolescent life away from their families.

\_

Reasons to go to Boarding School:

1. Great teachers:

Boarding schools traditionally hire teachers with degrees in their subjects. As well a large number of these experienced teachers have advanced degrees in their field. Typically all are passionate about their subject and love to teach it to young people. Because discipline is rarely a problem in boarding school, these talented teachers get to teach without having to be traffic cops or paper pushers like their public school counterparts.

2. Sports facilities:

Most boarding schools have amazing sports facilities. The range of sports and teams is mind-boggling. You will find everything from squash to crew, hockey to basketball.

3. Arts facilities:

Theatre, dance, music, fine arts, in short, anything and everything artistic is part of the opportunity which awaits you at most boarding schools. Several schools have magnificent performing arts centers and museums.

4. Learn to live away from home:

You will learn how to cope with life and all its many high and low points within a community of your peers who are going through the same things you are. All of this is happening under the watchful eye of your teachers who are mentors, not baby-sitters.

5. More academic work:

The depth and breadth of the academic courses in most schools is remarkable.

6. Better library:

The older, more established schools have traditional library facilities which in many cases are better equipped than those at many colleges. Libraries have morphed over the years into media centers. The typical boarding school library will have the latest technology available, in addition to all the usual print materials. And they will have them in abundance.

7. You will learn to be responsible for yourself:

Taking a lot of little steps towards maturity is one of the intangibles of going to boarding school. You have to learn to get along with others because it is a community. You learn to be responsible for your actions because you are bound by an honor or discipline code of some kind. The lessons in life learned in boarding school will lay a solid foundation for adulthood.

8. Small classes:

If you are in a public school with 30-40 students to a class, chances are that you will just be a number, unless you are very smart or very bad. You will probably get lots of attention either way. In a boarding school, on the other hand, classes typically are 10-15 students. You cannot hide in a class that small. You have to participate. You will get called upon for your response. You will never just be a number in a boarding school.

9. Cool to be smart:

This is probably the best reason to go to boarding school. In a public school the kids who really want to learn frequently end up being social outcasts. Not so in boarding school. It’s cool to be smart in boarding school. It’s also very cool to learn.

\_

Boarding school cons:

As with any sort of education, the boarding school experience is not without its disadvantages – even in the modern boarding school, which places huge emphasis on the wellbeing of its pupils. The harsh discipline and lack of home comforts associated with boarding school in days gone by are, thankfully, very much a thing of the past, but there are still one or two drawbacks with this style of education. Let’s see what they are.

1. Parents feel much less involved in their child’s upbringing:

There’s no escaping the fact that when you send your child to boarding school, you’re handing over a major chunk of their upbringing to someone else. When your child goes to boarding school, you’re relinquishing a lot of the decisions you’d normally make about what your child is and isn’t allowed to do, and the responsibility for their upbringing falls temporarily on someone else’s shoulders. They will probably be going to someone else – a school-appointed pastoral carer – with their problems, which may make you feel redundant. Many parents find this idea hard to cope with, and feel a great sense of loss when their children go off to boarding school. You won’t be there to chat to them over breakfast or say goodnight to them when they go to bed, and in these vital years of your child’s life, when they’re growing fast, you’ll inevitably miss out on a lot of their childhood.

2. Homesickness will strike at some point:

Homesickness is likely to rear its ugly head at some point or another, at least in the beginning. Your child will be away from home for the first time, in an unfamiliar environment away from their family and home, and their new way of life will take some getting used to. They will almost certainly get used to it sooner or later – but both you and they might find it difficult when they’re grappling with feelings of homesickness, and it will probably make you wonder whether you’ve done the right thing.

3. Boarding school costs significantly more:

The other disadvantage of boarding school is that it costs significantly more than day school – you can expect to pay over £30,000 a year at the top boarding schools. There are state boarding schools for those for whom these sorts of costs are unfeasible, but you’re still looking at £10,000 or so a year even for that; only the tuition is paid for by the Government, so you still need to stump up the cash for the boarding costs.

\_\_\_\_\_\_\_\_

Single-sex vs. mixed education (co-education):

Single-sex education (same-sex education):

The U.S. Department of Education defines single-sex education as education at the elementary, secondary, or postsecondary level in which males or females attend school exclusively with members of their own sex.

Note: Sex describes the biological structures of individuals. Gender describes social identity.

While there are a variety of rationales for single-sex education, the reasons usually emphasized are to address (a) male-female differences in development and performance and (b) the achievement gap favoring boys and discriminating against specific racial minorities growing up in poverty. Additional rationales include notions such as that boys will focus better on school tasks if not distracted by girls and that all girl classes will counter gender-bias toward girls as well as eliminating the distraction of boys.

How do Single-Sex Education offerings vary?

Variations include (1) single-sex schools, (2) co-ed schools offering single-sex classes, and (3) schools that differ in socio-economic, racial, and religious composition.

What is the status of Research Findings related to Single-Sex Education?

Research has focused on two major matters: (1) the relevance of male-female differences as a rationale for single-sex education and (2) the positive and negative impact of single-sex education. Clearly, males and females differ in many ways, but research has not made the case that gender variations trump other differences that should be addressed in schools (e.g., individual differences in development and motivation). And the findings about impact remain equivocal because of the methodological problems encountered by research in this arena. Given the status of the legal and research matters, decisions about same-sex education tend to be based on the values and beliefs of decision makers and often are shaped by politics and economics. Different cost-benefit analyses of advantages and disadvantages arise from evaluations focused on the impact on (a) individuals (e.g., academic achievement, personal growth, health, social development), (b) subgroups (e.g., outcome differences in socioeconomic opportunities and status), and (c) the society (e.g., enhancing equity of opportunity, facilitating socialization/teaching/parenting, economic development).

\_

Common Positive Claims for single-sex education:

Proponents argue that, compared to co-educational classes, single-sex education improves learning and performance by allowing a better match for teaching and learning. That is, as with other forms of homogenous grouping, separate classes for girls and boys are seen as enabling teaching and learning and reducing achievement gaps. For girls, for example, single-sex education is viewed as a way to enable them to do better in math and science, opening up careers where females are under-represented. Also, almost 90% of girls in co-ed high schools are affected by some form of sexual harassment which is prevented in all-girl high school. For urban African-American and Latino males, single-sex education is viewed as a way to counter dropouts and the school-to-prison pipeline.

Examples of problems in co-educational settings that are emphasized include:

• boys and girls develop at different rates which produces differences in their respective academic learning readiness in the early schooling years

• teachers often respond differently to males and females (e.g., favoring males, overprotecting females)

• peer attitudes toward the opposite sex also differ in the early years of schooling and change with biological development (e.g., male domination of females, distractions due to the presence of the opposite sex)

• sexual activity that leads to pregnancy and sexually transmitted diseases.

Proponents also assert that single-sex education counters male-females stereotypes by ensuring that both sexes can

• take initiative in meeting challenges

• assume leadership roles

• pursue activities that in co-educational settings often are seen as too “masculine” for females or too “feminine” for males.

\_

Common Claims Against single-sex education:

Opponents argue that public funds should not be used to support single-sex education because the approach

• has not generated methodologically sound empirical evidence showing societal benefits (e.g., findings related to improved achievement for males and females is equivocal, achievement gaps are more associated with socio-economic factors than gender and CNS differences)

• maintains and even exacerbates sexist attitudes and gender stereotypes (e.g., gender oriented facilities and teaching content and methods create a gender-stereotypical environment, limit exposure to the opposite sex and cross sex social-emotional learning)

• can make transition to co-educational situations difficult.

In addition, it is suggested that single-sex schools tend to overemphasize academics at the expense of “whole child” development (e.g., they tend to minimize activities that promote creative expression, intrinsic motivation, and positive attitudes toward schooling). And, from a teaching perspective, opponents underscore that behavior often is harder to manage in all male classes.

\_

Are Single-Sex Schools better than Co-Ed Schools?

Each option has its own pros and cons, and researchers have conducted several studies, such as Harvard’s Women and Men in the Classroom: Inequality and Its Remedies, that remain inconclusive as to whether either is superior. The decision ultimately resides with the student’s and parents’ preferences.

Attractions and Distractions:

The biggest issue in the single-sex versus co-ed schools debate is the possibility of attraction and distraction in the classroom. Many people say that if the other sex is in the classroom, the other will do nothing but ogle classmates of the other sex and not pay any attention to the teacher. Other distractions include the injection of the other sex’s breed of humor, or whether or not particular students talk more often and longer than others. The validity of this argument is questionable, especially as a blanket statement. Sure, there is some truth to it. But what about people attracted to the same sex? Or those not interested in dating anyone? Or those who are open to dating, but not easily distracted in the classroom (which was my personal experience)? For these students and myself, the co-ed classroom may be no worse at all.

Comfort in the Classroom:

Aside from the other sex being a distraction, a drawback about a co-ed setting is that students are sometimes intimidated by the other sex and may be less comfortable participating in class discussions and activities. Fear of embarrassment or feelings of inadequacy may accompany the co-ed classroom experience. However, many students may find that they thrive in the co-ed environment, being able to relate to the other sex and play off of their thoughts and ideas. University of Pennsylvania researchers performed a study in South Korea that randomly split up students into single-sex and co-ed schools. The research showed that students of both sexes placed in single-sex classrooms were more likely to attend four-year colleges and receive higher test scores. However, though proponents of single-sex schools cite an improvement in classroom behaviors, according to research by the American Psychological Association, which analyzed 184 studies on single-sex versus co-ed schools, many of these studies found no difference in participation or aspirations in single-sex classrooms.

Interpersonal Communication:

The perspectives of the other sex are lost in discussion in single-sex classroom, but also, the ability to communicate with the other sex may not develop as quickly as it would in a co-ed environment. Being able to communicate with the other sex, both in and out of the classroom, is crucial for preparing students for the professional world. However, for those in a single-sex environment, social interactions with the other sex outside of school offer the chance to develop these communication skills, so single-sex schools may not be a hindrance at all. One study reported that dividing boys and girls into separate classrooms actually delays the development of interpersonal communication because the separation fosters stereotypes, which may prevent both sexes from understanding each other properly in co-ed classrooms or out in the real world.

Physical Appearance:

For both male and female students in co-ed environments, some may spend more time focusing on their physical appearance to look attractive to other students. In the end, the student and her parents make the decision about which option would be the best fit for her academic and social preference.

\_

Girls at single-sex schools outdo those in co-education – analysis:

Study of 2015 results in England shows 75% of pupils in all-girl secondaries received five good GCSEs compared with 55% going to mixed schools. It follows comments by a leading headmaster that pupils at all-girl schools could be at a “huge disadvantage” in later life because they had not socialised with boys. The research looked at results for England’s 378 mainstream single-sex state schools, including 161 which are all-boy and 217 all-girl. Around a third are grammar schools. The analysis showed the advantages for girls-only schools remained when results were adjusted for other factors including social background and selective intake. The overall picture that emerges is one in which single-sex secondary schooling for girls does seem to have some benefits, at least when it comes to these particular measures of GCSE performance. It also raises the interesting question of why girls, perhaps among other groups, seem to benefit more than boys from single-sex schooling – and what, if anything, the majority of mixed schools might be able to learn from this.

\_

So, where do we stand on same-sex education?

Does it enhance overall equity of opportunity to succeed at school and beyond? What role does it play with respect to various stereotypes and biases? How does it enhance teacher efforts to match individual differences and personalize instruction? At this time, the answers to basic questions about same-sex education cannot be satisfactorily answered by formal research findings. Prevailing pro and con arguments reflect a host of considerations (e.g., philosophical, economic, political, psychological, personal). Proponents on either side of the debate regularly provide counter arguments. Others caution that arguments about single-sex education tend to pay too little attention to school and staff variables that have the greatest impact on students. In the end, policy makers are caught making decisions about single-sex education that balance political and economic costs and benefits, and when there is a choice, parent are left to make decisions they believe are in their child’s best interests.

\_\_\_\_\_\_\_\_\_

Private Tuition &Tutoring:

There are two types of parents. Those who think that tutors are only a waste of money and time and that a child can learn everything they need to learn in school. The other type are parents who think that school is a place where a child cannot learn a thing and who believe that tutors are the only way for their child to learn. As it so often happens, the actually truth is somewhere in the middle.

\_

One teacher one student private tuition:

If your aim is to improve your aptitude and knowledge base in a particular field, all education pertaining to this subject will useful. If this statement is assumed true, then the benefits afforded by private tuition are enormous. You will have the advantage of a whole teacher to yourself, with their lesson plans and strategies of teaching designed just for you! It seems impossible to doubt the enormous benefits this will offer. In a classroom, one teacher may be faced with around thirty pupils, each with different abilities, different rates of learning, and individual strengths and weaknesses; yet despite this, for the majority of the lesson the teacher will be forced to treat his class as if it contained just one student. He or she will orate from one end of the classroom, unable to gauge how effectively each pupil is assimilating the lesson. The lesson plans will be designed to fit the needs of the average pupil; and the teacher will proceed at a rate suitable for the average pupil. In this environment it is all too easy for a bright child or adolescent to fail to grasp one particular point, as the swathe of teacher talk washes over them like the unrelenting tides. It is unlikely even the best of teachers would spot the particular point of misunderstanding cast on the countenance on one pupil, hidden amongst so many other faces. To draw attention to their lack of understanding can be intimidating for the pupil: everyone else is silent, so they must have understood. Do I want to draw attention to myself? All too often the misunderstanding goes unexpressed and unaided. The obvious benefit of one to one tuition is that the tutor can tailor their teaching style to the abilities of their student. They will be able to gauge the level of the pupils understanding, and, more importantly, track down the sources of misunderstanding, and deal with them effectively. Away from the bustle of the classroom, the student will feel more able to voice their difficulties; and having just one pupil to deal with, the teacher will be more capable of resolving them. Compared to the conflicts of the classroom, fraught with distractions and intimidations from other pupils, the relaxed environment of tutor and student can be a safe haven of erudition. Most tutors will be willing to travel to the pupil’s house, allowing them the benefit of learning in a happy home location. A tutor will be able to focus their teaching on a particular area: the pupil may be very competent in mathematics overall, but be deficient in calculus, with this specific weakness undermining their whole confidence in the subject. Maybe they are highly literate and proficient in English language, but shy away from public speaking. The syllabus may demand some oral work (foreign languages certainly do), so it would be a shame if this particular and minor deficiency detracted from their overall grade in the subject. Even if the pupil is performing well at school or college, it is highly likely that some private tuition will give then the edge over their peers. The main disadvantages of private tuition is that it is more expensive in the short term, one is limited to only the teacher as a training partner, and one does not feel any sense of belonging or loyalty to the teacher and his school.

\_

One teacher many students private tuition:

Tuitions are a time when the students have to not only study at home, but they also have to go out and study again. There are some places where the tuitions are held at the school by one of the teachers or the tuitions may be in another place where the child has to go after school. Though people think that tuitions are good, there are a lot of disadvantages of tuitions. There are major disadvantages of tuitions over the children who do not attend tuitions.

Waste of time:

This is a waste of time because the child learns almost the same things that are taught in the school. This can lead to reinforced learning according to some people, but the truth is that the child is simply wasting the time, when the child could have studied or learnt something useful in that time. Other than the waste of time in the time that is being spent in the tuitions, the child has to travel to and from the place of the tuitions and this is another reason for the waste of time. The child will be travelling during the prime time and this time could have been put to better use by the child, if the child had been studying in the home or school.

Too much work:

The child will be having a lot of work to do. This can cause the child to become depressed. There is so much of work to the child that the child will not be able to concentrate. This is similar to what is said in the proverb that too many cooks spoil the broth. The child will not know what to learn as there are many instances where what is being said in the school is very different as to what is being said in the tuitions as the teachers in each of these places will be different. Finally, the child will become confused and this will cause the average marks that are scored to reduce, missing the whole point of the tuitions.

Child loses independence:

The best children are the ones who are self-made. If the child goes for the tuitions, there is no time for self-study and it is as if the child is being spoon fed all though the education. This can lead to deprivation of the chance for the child to be a self-made person who is independent. The child will become dependent for the education because of the tuitions. This is again against the whole aim of educating the child. The parents should ensure that their children are free and are able to be independent people who are able to study on their own.

Overworked and stressed:

As the child goes to the tuitions and then comes home to study, there will not be any time to rest or relax. The child has to get up the next morning, get ready for school and rush. This is like a routine life that becomes mechanical. Though the child who is not able to do well in studies needs such motivation, putting every child through this can lead to the child being overworked and finally, the child will not be able to achieve much because of the mental tiredness. Children are spending the time after their school timings in their tuition classes in addition to their school, homework, projects and assignments. This makes them sleep deprived, anxious and stressed. This is another reason or disadvantage of the tuitions.

Rob the childhood:

Tuition classes will take the time which a kid has to spend on other activities. This will tie them in a world relate only to academics. Tuition classes will keep children away from most of the fun and activities that they have to enjoy in their childhood.

Timetable life:

This will force your kid to live according to a time table by following the allotted time for each and every activity. A timetable including tuition classes will make your kid spend time in a formulated manner, where they have to spend maximum time on academics.

Note:

In India, private tuition classes have become norms in big cities and towns. Parents believe that traditional formal education in schools is inadequate and so send their children to private tuition classes for better learning. Also parents either don’t have time or don’t want to spend time to help children in education, or themselves uneducated; so send children to private tuition classes.

\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_

Un-schooling and home-schooling:

\_

Unschooling is an educational method and philosophy that advocates learner-chosen activities as a primary means for learning. Unschooling students learn through their natural life experiences including play, household responsibilities, personal interests and curiosity, internships and work experience, travel, books, elective classes, family, mentors, and social interaction. Unschooling encourages exploration of activities initiated by the children themselves, believing that the more personal learning is, the more meaningful, well-understood and therefore useful it is to the child. While courses may occasionally be taken, unschooling questions the usefulness of standard curricula, conventional grading methods, and other features of traditional schooling in the education of each unique child. The term “unschooling” was coined in the 1970s and used by educator John Holt, widely regarded as the “father” of unschooling. While often considered a subset of homeschooling, unschoolers may be as philosophically separate from other homeschoolers as they are from advocates of conventional schooling. Unschooling expands from children’s natural curiosity as an extension of their interests, concerns, needs, goals, and plans. While home-schooling has been subject to widespread public debate, little media attention has been given to unschooling in particular. Critics of unschooling see it as an extreme educational philosophy, with concerns that unschooled children will lack the social skills, structure, and motivation of their schooled peers, while proponents of unschooling say exactly the opposite is true: self-directed education in a natural environment better equips a child to handle the “real world.”

\_

Philosophy of Unschooling:

Children are natural learners:

A fundamental premise of unschooling is that curiosity is innate and that children want to learn. From this an argument can be made that institutionalizing children in a so-called “one size fits all” or “factory model” school is an inefficient use of the children’s time, because it requires each child to learn specific subject matter in a particular manner, at a particular pace, and at a specific time regardless of that individual’s present or future needs, interests, goals, or any pre-existing knowledge he or she might have about the topic. Many unschoolers believe that opportunities for valuable hands-on, community-based, spontaneous, and real-world experiences may be missed when educational opportunities are limited to, or dominated by, those inside a school building.

Learning styles:

Unschoolers note that psychologists have documented many differences between children in the way they learn, and assert that unschooling is better equipped to adapt to these differences. People vary in their “learning styles”, that is, the preference in how they acquire new information. However, research has demonstrated that this preference is not related to increased learning or improved performance. Students have different learning needs. In a traditional school setting, teachers seldom evaluate an individual student differently from other students, and while teachers often use different methods, this is sometimes haphazard and not always with regard to an individual student.

Developmental differences:

Developmental psychologists note that just as children reach growth milestones at different ages from each other, children are also prepared to learn different things at different ages. Just as some children learn to walk during a normal range of eight to fifteen months, and begin to talk across an even larger range, unschoolers assert that they are also ready and able to read, for example, at different ages, girls usually earlier, boys later. In fact, experts have discovered that natural learning produces far greater changes in behavior than do traditional learning methods, though not necessarily an increase in the amount of information learned. Traditional education requires all children to begin reading at the same time and do multiplication at the same time; unschoolers believe that some children cannot help but be bored because this was something that they had been ready to learn earlier, and even worse, some children cannot help but fail, because they are not yet ready for this new information being taught.

Essential body of knowledge:

Unschoolers sometimes state that learning any specific subject is less important than learning how to learn. They assert, in the words of Holt: Since we can’t know what knowledge will be most needed in the future, it is senseless to try to teach it in advance. Instead, we should try to turn out people who love learning so much and learn so well that they will be able to learn whatever must be learned. It is asserted that this ability to learn on their own makes it more likely that later, when these children are adults, they can continue to learn what they need to know to meet newly emerging needs, interests, and goals; and that they can return to any subject that they feel was not sufficiently covered or learn a completely new subject. Many unschoolers disagree that there is a particular body of knowledge that every person, regardless of the life they lead, needs to possess. Unschoolers argue that, in the words of John Holt, “If children are given access to enough of the world, they will see clearly enough what things are truly important to themselves and to others, and they will make for themselves a better path into that world than anyone else could make for them.”

The role of parents:

Parents who unschool their children act as “facilitators,” providing a range of resources, helping their children access, navigate, and make sense of the world, and aiding them in making and implementing goals and plans for both the distant and immediate future. Common parental activities include sharing interesting books, articles, and activities with their children, helping them find knowledgeable people to explore an interest with (anyone from physics professors to automotive mechanics), and helping them set goals and figure out what they need to do to meet their goals. Unschooling’s interest-based nature does not mean that it is a “hands off” approach to education. Parents tend to involve themselves, especially with younger children (older children, unless new to unschooling, often need less help finding resources and making and carrying out plans).

\_

Home education (home-schooling):

Unschooling is a form of home education, which is the education of children at home rather than in a school. Home education is often considered synonymous with home-schooling. Unschooling contrasts with other forms of home education in that the student’s education is not directed by a teacher and curriculum.

Disadvantages of home schooling:

Home schooling is a full time job for one of the parents. It takes a lot of work and discipline in order to make sure you child gets everything they need. Very few parents are knowledgeable enough to give a high school student everything they need. One of the major disadvantages of a homemade education is the lack of data based decision making and instructional strategies. In most homemade educations, you have individuals in the position of power who know little of the education process or structure.

\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_

Educational technology (ET = edtech):

Educational technology (education technology) is the effective use of technological tools in learning. As a concept, it concerns an array of tools, such as media, machines and networking hardware, as well as considering underlying theoretical perspectives for their effective application. Electronic educational technology, also called e-learning, has become an important part of society today, comprising an extensive array of digitization approaches, components and delivery methods. In 2012, the e-learning had grown at 14 times the rate of traditional learning. Educational technology includes numerous types of media that deliver text, audio, images, animation, and streaming video, and includes technology applications and processes such as audio or video tape, satellite TV, CD-ROM, and computer-based learning, as well as local intranet/extranet and web-based learning. Information and communication systems, whether free-standing or based on either local networks or the Internet in networked learning, underlie many e-learning processes. Richey defined educational technology as “the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources”. The Association for Educational Communications and Technology, the professional society for ET, defines it as: Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources. As a field, educational technology emphasizes communication skills and approaches to teaching and learning through the judicious use and integration of diverse media. Practitioners in educational technology seek new and effective ways of organizing the teaching and learning process through the best possible application of technological developments. These activities rely upon a body of knowledge for successful and ethical implementation, rather than routine tasks or isolated technical skills.

\_

Technological tools can foster students’ abilities, revolutionize the way they work and think, and give them new access to the world. If we removed all of the computers from schools tomorrow, would it make a big difference in the knowledge and skills students demonstrated upon graduation? Probably not. What if we removed all of the computers from businesses tomorrow? Most businesses would find it nearly impossible to continue. Why is it that schools rumble along virtually unchanged by the presence of computers? Do computers and other technologies offer less to educators than they do the business community? Many educators would answer yes, feeling that the humanistic nature of education makes computers and other technologies less valuable. Increasing numbers of educators, however, are experiencing the power of technology. Despite the popular inclination to equate computers and other high-tech electronic tools with the term technology, the definition includes two components: a product—the tool that embodies the technology—and a process—the information base of the technology. Both technological products and their systematic processes have a great deal to offer schools. According to John Naisbitt in Megatrends, new technologies pass through three stages (1982). In the first stage, the new technology follows the “line of least resistance,” into a ready market. At the second stage, users improve or replace previous technologies with the new technology. Finally, in the third stage, users discover new functions for the technology, based on its potentials. They ask, “What can we do now that was not possible before?” In the educational use of modern electronic technologies, we are just entering this third stage. In stage three, educators use technology as integral components of learning.

Reasons for using Education Technology in stage 3:

1. Students learn and develop at different rates. Technology can individualize instruction. Through computer networks called integrated learning systems, teachers can prescribe individual learning paths for students. Such systems offer thousands of lessons covering the same basic skills now taught in a lock-step way through textbooks to groups of students with incredibly different backgrounds, interests, and motivation. With an integrated learning system, students can move at an appropriate pace in a nonthreatening environment, developing a solid foundation of basic skills rather than the shaky foundation a calendar-based progression often creates.

2. Graduates must be proficient at accessing, evaluating, and communicating information. Educational technologies can—by design—provoke students to raise searching questions, enter debates, formulate opinions, engage in problem solving and critical thinking, and test their views of reality. Online tools and resources allow students to efficiently gather and evaluate information, and then communicate their thoughts and findings. This communication may require reading; thinking; writing; creating charts, graphs, and other images; or the organization and production of information using spreadsheets and databases.

3. Technology can foster an increase in the quantity and quality of students’ thinking and writing. Perhaps one of the best documented successes with computers in education is in developing students’ writing. Several features of word processors seem to reduce the phobia often associated with writing. Writing on the computer has a temporary feel, making it easier to take creative and grammatical risks. Difficulty with the fine motor skills required by handwriting usually does not transfer to the keyboard; thus the word processor can reduce frustration. Editing and revising can occur almost as quickly as one thinks, and finished products printed from a word processor have a professional quality that generates a sense of accomplishment.

4. Graduates must solve complex problems. Higher-level process skills cannot be “taught” in the traditional sense; they cannot be transferred directly from the teacher to the learner. Students need to develop these skills for themselves, with appropriate guidance. They need to struggle with questions they have posed and search out their own answers. A collection of computer applications often called productivity tools could revolutionize the way students work and, more important, the way they think. Databases, spreadsheets, computer-assisted design, graphics programs, and multimedia authoring programs (programs for creating computer-based presentations or lessons) allow students to independently organize, analyze, interpret, develop, and evaluate their own work. These tools engage students in focused problem solving, allowing them to think through what they want to accomplish, quickly test and retest solution strategies, and immediately display the results.

5. Technology can nurture artistic expression. Modern technology-based art forms (video production, digital photography, computer-based animation, and the like) have great appeal, encouraging artistic expression among our diverse student population. These tools provide forms of artistic communication for those students who have been constrained by the traditional options of verbal and written communication, and they increase motivation and foster creative problem-solving skills as students evaluate the many possible ways to communicate ideas.

6. Graduates must be globally aware and able to use resources that exist outside the school. With few exceptions, children’s domains of discovery during the school day are limited to the classroom and the school. Technological tools allow students to inexpensively and instantly reach around the world, learning first-hand about other cultures. Various technologies can provide up-to-date maps and demographic data, and computer-based wire services can bring a newsroom-quality stream of current events into the school.

7. Technology creates opportunities for students to do meaningful work. Students need to produce products that have value outside school, receive feedback on their work, and experience the rewards of publication or exhibition. Technology can provide a widespread audience for students’ work. Computers link students to the world, provide new reasons to write, and offer new sources of feedback on ideas. Students’ video products shown on local cable stations can produce high levels of motivation and accomplishment.

8. All students need access to high-level and high-interest courses. Electronic media can bring experiences and information previously unimagined by students into the classroom. Through instructional television, students can view and discuss events they otherwise could not experience. Laserdiscs and CD-ROMs put thousands of images and topics at students’ fingertips. Distance education technologies can bring important learning experiences to students, even in districts where small student populations have made some courses impossible to offer.

9. Students must feel comfortable with the tools of the Information Age. Computers and other technologies are an increasingly important part of the world in which students live. Many of today’s information producers are converting their knowledge bases to digital format and are constructing new technologies to increase speed, capacity, and reliability of dissemination. As telephone, computer, television, and other media merge, incredible resources will become available. Traditional model of education will not prepare students to take advantage of these resources.

10. Schools must increase their productivity and efficiency. Technology can re-place (not replace) the teacher. When stage-three educators determine what students should do and how teachers and technologies can support students, many of the routine tasks done by teachers can be reassigned to technology, elevating the role of teacher. Some things only teachers can do. Teachers can build strong, productive relationships with students. Technologies can’t. Teachers can motivate students to love learning. Technologies can’t. Teachers can identify and meet students’ emotional needs. Technologies can’t. Technology-based solutions in education can, and must, free the teacher to do the important work that requires human interaction, continuous evaluation, and improvement of the learning environment. Computer-based technologies can administer individualized lesson sequences that branch and remediate according to students’ unique needs, quickly and automatically track progress, perform data analysis, and generate reports. Other computer-based tools enable teachers to quickly generate individualized communications to parents, create lesson plans, and select instructional materials from a rich resource database. If entire schools or districts use such capabilities, record keeping and communication can be dramatically enhanced.

\_

Growing with Technology:

When educators allow students to interact with technologies in meaningful ways for significant periods of time, the growth that follows will encourage educators to try new things. Technology is often the Trojan Horse through which innovation enters the school. To see students so engaged in learning that they lose track of time, to see a level of excitement that causes students to come to school early and stay late, and to have time to develop strong relationships with students and to meet their individual needs, will inspire educators to take more frequent and larger steps into stage three. Modern technological tools allow educators to fulfil age-old dreams. We can individualize instruction. We can create simulations through which students can discover important relationships and construct new knowledge. We can even put the reins into the hands of students and watch as these tools take them to destinations they envision.

\_

Macro-level models of education technology:

It has been promised for a long time that technology will change education for better – make it more affordable and accessible. The promise of educational technology is more important in developing nations because they have a massive deficit of access to high quality education at the primary and high school level due to a number of seemingly insurmountable challenges, ranging from geographical distribution to socio-economic condition of the learners who attend formal schools. Also, the cost of educating populations has been steadily increasing, and there is expectation that technology may make education­ affordable for those who are so far unable to benefit from the same. There was a time when experts talked about education technology in terms of audio, visual and experiential technology. They also spoke about hardware technology, software technology and system based technology. These are now jargons of the past, as rapid strides made in the last decade in domain of education technology, sometimes called edtech has made old concepts obsolete. It is estimated that about a billion people globally are now benefitting from education technologies. Global investors have invested billions of dollars in education technology developers and the result is showing. In the US, edtech is a burgeoning industry growing at a breakneck speed.

1. Classroom based technologies:

The earliest innovations and successful edtech business models were created around providing softwares and hardware to make the classroom experience better. A lot of this is about making multimedia based study material, and having computers and screens in classrooms where audio-visual material can be used to teach. However, progress in edtech has led to much more than just multimedia content in the classroom.

2. Classroom based distance learning:

This kind of technology became very popular in late nineties and remained in use throughout last decade. Satellite beaming of live classes or VSAT, study centers equipped with hardware where students interacted with a teacher teaching remotely became very common for a lot of private sector tutorials, especially for testprep. Even Indian government has tried to promote this model in the past with help from IITs, and EDUSAT was a venture in this line. However, while low cost and high speed of internet have made this technology more viable and VSAT unnecessary, infrastructure cost of study centers and real estate prices work as a restraint on this model.

3. Social platform for a classroom to interact online:

Peer to peer learning can be very important, and a class should continue to interact and learn collaboratively even after class hours. This idea led many social learning platforms to come up. Many social learning platforms like Grockit, remixlearning.com have achieved tremendous success. In India, pagalguy.com is a good example, but there are not too many other instances of social learning, especially for primary and high school education. The school boards can definitely do a lot in this respect.

4. Classroom emulating online environments:

Apart from technology that helps to enhance the classroom experience itself or is being used within the classroom, another major domain of technology is online learning environments where one can learn, give exams, attend lectures, get access to study materials and interact with faculty as well as other students.

5. Mobile based learning management systems (M learning):

In developing nations, more people have access to smartphones with internet as opposed to computers with broadband connections. This is a big cause of investing significantly in mobile based learning technology. There is no doubt that putting learning resources in the phone itself turns it into a very useful tool. Mobile based courses have to be optimized for a smaller screen, lower computing power, and slower internet.

6. Gamification of learning (G learning):

Gamification is one of the most appreciated approaches to technology-driven learning and is a potentially revolutionary idea. The biggest challenge in education is to engage students in a meaningful way, and make them genuinely interested in the subject. Gamification attempts to make this possible by reducing drudgery of studying and chances of getting distracted by embedding a lesson itself inside a game. Also, introduction of leaderboards, awarding of badges on completion of tasks, showing daily graphs of progress, breaking down learning in small tasks and so on tend to make a lot of students more interested in studying. Gamification can increase learner engagement to incredible levels, to the point of learning addiction.

\_\_\_\_\_\_

Educational animation:

Educational animations are animations produced for the specific purpose of fostering learning. Educators are enthusiastically taking up the opportunities that computer animation offers for depicting dynamic content. For example, PowerPoint now has an easy-to-use animation facility that, in the right hands, can produce very effective educational animations. Because animations can explicitly depict changes over time (temporal changes), they seem ideally suited to the teaching of processes and procedures. When used to present dynamic content, animations can mirror both the changes in position (translation), and the changes in form (transformation) that are fundamental to learning this type of subject matter. With animated depictions, information about the changes involved is available to be read straight from the display without the learner needing to perform mental animation.

\_

Educational effectiveness of animations:

Animations may lack educational effectiveness if target learners can’t process the presented information adequately. For example, it seems that when the subject matter is complex, learners may be overwhelmed by animated presentations. This is related to the role of visual perception and cognition in human information processing. Our human perceptual and cognitive systems have limited capacities for processing information. If these limits are exceeded, learning may be compromised. For example, the pace at which the animation presents its information may exceed the speed at which the learner can process it effectively. The above animation (part of a pumping system) is problematic for this reason. But the solution is obvious: slow the animation down and accompany it with a written explanation. It is unlikely that superior learning is achieved by thoughtlessly substituting animation for a static graphic but by having it accompany textual explication. Another suggestion for addressing such problems is to provide user control for the learner over how the animation plays. User controllable animations allow learners to vary aspects such as the playing speed and direction, labels and audio commentary to suit themselves.

\_

E-books:

E-books hold an unimaginable potential for innovating education, though as some schools have already discovered, not all of that potential has been realized yet. A digital textbook that is merely a PDF on a tablet that students can carry around might be missing out on huge possibilities like models and simulations or visualizations.

\_

Epistemic Games:

Epistemic games put students in roles like city planner, journalist, or engineer and ask them to solve real-world problems. The Epistemic Games Group has provided several examples of how immersing students in the adult world through commercial game-like simulations can help students learn important concepts. In one game, students are cast as high-powered negotiators who need to decide the fate of a real medical controversy. Creative professionals learn innovative thinking through training that is very different from traditional academic classrooms because innovative thinking means more than just knowing the right answers on a test. It also means having real-world skills, high standards and professional values, and a particular way of thinking about problems and justifying solutions. Epistemic games are about learning these fundamental ways of thinking for the digital age.

\_\_\_\_\_

Course development environments in education technology:

1. Education course development systems:

While there are very good course delivery platforms available, software that helps the teacher to create and curate courses effortlessly are fewer in number. If good teachers are enabled to create courses that can be used by other teachers elsewhere, the shortage of quality content can be solved to a great extent. Keeping this is mind, some organizations have tried to create software that helps teachers to create a course. Google has taken some initiative in this regard. However, Projia is a leader in this space with its software that can help a teacher to rapidly find open education resources without copyright restrictions.

2. Adaptive teaching platforms:

Not all students learn in the same way. Not every student’s weaknesses and strengths are the same either. Still, all modern education systems deliver the same content for everyone. Can this be changed? Can customized study material and teaching be delivered to every individual student according to what he needs? Adaptive learning platforms can adapt its content and delivery according to the needs and abilities of the student using the platform. This is a very advanced idea and can change the life of many students. Perhaps a technology like this can reduce the aversion a large number of students develop towards studying from an early age.

Students grouped by abilities:

A radical step, grouping students by level or learning abilities rather than just grades can make a huge difference to the overall performance of students. While the formal education system may not allow schools to do this, they can leverage the power of digital content builders to create and distribute varying content modules for students depending upon their capabilities. So students, irrespective of their levels, can access these modules and learn. A class V student weak in English can now access exclusive online study modules that combine previous lessons, grammar basics and language practice materials helping the student to enhance his language skills even without a teacher. Schools can create online groups of students with similar capabilities and assign specific content modules to enhance their performance.

3. Rapid content authoring systems:

Creating engaging content is very difficult. However, rapid content authoring systems help educators to create online content very quickly. Powtoon is a prominent example of a rapid content authoring system which helps to create simple animated videos very fast by anyone who knows basic functions of a computer. Without this technology, a teacher would have had to hire an animation studio to achieve the same.

4. Classroom delinked technology:

There is also a lot of technology and e-learning business models that do not rely on traditional education system or the classroom at all. A great example is that of Duolingo, a language learning app available on android that is used by millions of people to learn several languages for free.

Educational apps:

Educational apps are very popular with millions of android and iOS device users all over the world. It is not unusual for parents to let toddlers or primary school going children to play educational games and using apps on iPad or android tabs, and even mobile phones. It is amazing how stress-free the entire experience is for both parents and children. There are apps that can help one to increase reading speed, or reduce the fear of maths. There are apps developed to make children more hygiene and health conscious which are being adopted by state governments in the USA for use of school children. The fact that the price of tabs and smartphone is coming down significantly over the years and mobile internet is becoming very cheap – is very significant in this respect. How amazing it will be if kids are able to learn skills and improve their linguistic, mathematical and cognitive abilities effortlessly and get access to world class education at a very low cost through apps.

5. Online textbook depositories:

The cost of printing and physically distributing textbooks to every nook and corner of any developing country is a major constraint on universal access to education. It has been shown through business models in US that it is much cheaper and cost effective to give selective access to chapters in a textbook through online software. Even publishers have noticed an increase in revenue through such models as they avoid piracy of textbooks. If online textbook depository model can be implemented for school students, they may get access to millions of books on which no copyright exists for free. On the other hand, new textbooks which are still protected by copyright can be given to them online at low costs.

6. Diagnostic tools and differentiated lessons:

This is an amazing technology used in the testprep space and this is taking over all other teaching models inexorably. The idea is that not everyone needs to same lessons. Some people already know certain things, have certain weaknesses or can learn at different speeds. Hence, it is not appropriate and very inefficient to teach the same material to every student. One size does not fit all, and software can first diagnose what is the existing level of a person on any subject through diagnostic tests, and then create a customized study plan.

\_\_\_

Software in education technology:

\_

Importance of Information Technology in Education:

Both education and learning are life time processes, they have no limit on when to start and stop. It is very important to make education accessible at any time by everyone; this will help in reducing on the level of illiteracy. Information technology has the ability of speeding up information delivery, so this ability can be used in improving our education environment. With the implementation of Information Technology, costs of accessing educational material are cut down and it makes it easy for students to learn from anywhere. New technologies are changing the way we learn and they have also changed the process of teaching. Both teachers and students are using these new educational technologies to archive specific academic goals. The only challenge is that Information Technology comes at a cost, so those who cannot afford the price tend to have difficulties to benefit from the opportunities of Information Technology in education. For example; the increased use of internet broadband makes it easy for students to access academic information on time. Also teachers use this broadband internet to create and deliver academic data using videos and graphic illustrations. Information technology changes education in following ways:

•access to variety of learning resources

•immediacy to information

•anytime learning

•anywhere learning

•collaborative learning

•multimedia approach to education

•authentic and up to date information

•access to online libraries

•teaching of different subjects made interesting

•educational data storage

•distance education

•access to the source of information

•multiple communication channels-e-mail, chat, forum, blogs, etc.

•access to open courseware

•better accesses to children with disabilities

•reduces time on many routine tasks

\_

Benefits of education technology:

Using computers or other forms of technology can give students practice on core content and skills while the teacher can work with others, conduct assessments, or perform other tasks. Through the use of educational technology, education is able to be individualized for each student allowing for better differentiation and allowing students to work for mastery at their own pace. Modern educational technology can improve access to education, including full degree programs. It enables better integration for non-full-time students, particularly in continuing education, and improved interactions between students and instructors. Learning material can be used for long distance learning and are accessible to a wider audience. Course materials are easy to access. Students can access and engage with numerous online resources at home. Using online resources such as Khan Academy or TED Talks can help students spend more time on specific aspects of what they may be learning in school, but at home. Schools like MIT have made certain course materials free online. According to James Kulik, who studies the effectiveness of computers used for instruction, students usually learn more in less time when receiving computer-based instruction and they like classes more and develop more positive attitudes toward computers in computer-based classes. Employers’ acceptance of online education has risen over time. More than 50% of human resource managers SHRM surveyed for an August 2010 report said that if two candidates with the same level of experience were applying for a job, it would not have any kind of effect whether the candidate’s obtained degree was acquired through an online or a traditional school. The use of educational apps generally has positive effect on learning. Pre- and post- tests reveal that the use of apps on mobile devices reduces the achievement gap between struggling and average students. Kindergarten students that use iPads show much higher rates of literacy than non-users. Medical students at University of California Irvine that utilized iPad academically have been reported to score 23% higher on national exams than previous classes that did not. Mobile devices and apps have also been shown to assist in the education of disabled students, with one study reporting increased engagement and accelerated comprehension and learning.

\_

Education Technology helps students:

-they like it better than paper and pen

-provides multimedia to address all learning styles

-provides interactive, student centered activities

-provides extra support and help resources

\_

Education Technology helps teachers:

-organization and efficiency

-paperless

-finding lesson resources

-collaborate with other teachers

-connect with parents

\_

Disadvantages of educational technology:

According to Branford et al, “technology does not guarantee effective learning” and inappropriate use of technology can even hinder it. A University of Washington study of infant vocabulary shows that it is slipping due to educational baby DVDs. Adaptive instructional materials tailor questions to each student’s ability and calculate their scores, but this encourages students to work individually rather than socially or collaboratively. Social relationships are important but high-tech environments may compromise the balance of trust, care and respect between teacher and student. Massively Open Online Courses (MOOCs), although quite popular in discussions of technology and education in developed countries (more so in US), are not a major concern in most developing or low-income countries. One of the stated goals of MOOCs is to provide less fortunate populations (i.e., in developing countries) an opportunity to experience courses with US-style content and structure. However, research shows only 3% of the registrants are from low-income countries and although many courses have thousands of registered students only 5-10% of them complete the course. With the Internet and social media, using educational apps makes the students highly susceptible to distraction and sidetracking. Even though proper use has shown to increase student performances, being distracted would be detrimental. Students have always faced distractions; computers and cellphones are a particular challenge because the stream of data can interfere with focusing and learning. Too much information, coming too rapidly, can overwhelm thinking. Another disadvantage is increased potential for cheating. Smartphones can be very easy to hide and use inconspicuously, especially if their use is normalized in the classroom. These disadvantages can be managed with strict rules and regulations on mobile phone use. Neil Postman endorsed the notion that technology impacts human cultures, including the culture of classrooms, and that this is a consideration even more important than considering the efficiency of a new technology as a tool for teaching. Regarding the computer’s impact on education, Postman writes: What we need to consider about the computer has nothing to do with its efficiency as a teaching tool. We need to know in what ways it is altering our conception of learning, and how in conjunction with television, it undermines the old idea of school.

Danger of overstimulation:

Technology is rapidly and profoundly altering our brains. High exposure levels stimulate brain cell alteration and release neurotransmitters, which causes the strengthening of some neural pathways and weakening of others. This leads to heightened stress levels on the brain that at first boost energy levels, but over time actually augments memory, impair cognition, lead to depression, alter the neural circuitry of the hippocampus, amygdala and prefrontal cortex. These are the brain regions that control mood and thought. If unchecked, the underlying structure of the brain could be altered. Over-stimulation due to technology may begin too young. When children are exposed before the age of seven, important developmental tasks may be delayed, and bad learning habits might develop, which deprives children of the exploration and play that they need to develop.

\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_

Distance education (distance learning):

Distance education or distance learning is the education of students who are not physically present at a school. Courses that are conducted partly through distance education and partly on-site are referred to as hybrid or blended education. Massive open online courses (MOOCs), offering large-scale interactive participation and open access through the World Wide Web or other network technologies, are recent developments in distance education. A number of other terms (distributed learning, e-learning, online learning, etc.) are used roughly synonymously with distance education. Distance learning is gaining prominence among students eager to upgrade themselves for better career prospects. Distance courses serve as an alternative for students looking for further education without undergoing any form of conventional classroom learning. With the rising competitiveness in the market, more and more adults are taking interest in pursuing higher education. Considering the rise in interest for higher education via distance program, education providers are looking forward to offer new technologies in order to meet this demand. Distance education courses, no doubt, offer much freedom and flexibility. Most students enrolling for distance education courses are working full-time and are not in a situation to quit their jobs. They need a source of income to run their family’s expenses and quitting their jobs means risking financial problems. Hence, in order to upgrade their educational qualifications along with a job, they prefer taking up distance learning courses.

\_

University correspondence courses:

The University of London was the first university to offer distance learning degrees, establishing its External Programme in 1828. The background to this innovation lay in the fact that the institution (later known as University College London) was non-denominational and, given the intense religious rivalries at the time, there was an outcry against the “godless” university. The issue soon boiled down to which institutions had degree-granting powers and which institutions did not. Only a third of the American population lived in cities of 100,000 or more population in 1920; to reach the rest, correspondence techniques had to be adopted. Australia with its vast distances was especially active; the University of Queensland established its Department of Correspondence Studies in 1911. In South Africa, the University of South Africa, formerly an examining and certification body, started to present distance education tuition in 1946. The International Conference for Correspondence Education held its first meeting in 1938. The goal was to provide individualized education for students, at low cost, by using pedagogy of testing, recording, classification, and differentiation.

\_

Radio and television:

The very rapid spread of film in the 1920s and radio in the 1930s led to proposals to use it for distance education. By 1938, at least 200 city school systems, 25 state boards of education, and many colleges and universities broadcast educational programs for the public schools. One line of thought was to use radio as a master teacher. Experts in given fields broadcast lessons for pupils within the many schoolrooms of the public school system, asking questions, suggesting readings, making assignments, and conducting tests.

\_

Internet:

The widespread use of computers and the internet have made distance learning easier and faster, and today virtual schools and virtual universities deliver full curricula online. The capacity of Internet to support voice, video, text and immersion teaching methods made earlier distinct forms of telephone, videoconferencing, radio, television, and text based education somewhat redundant. However, many of the techniques developed and lessons learned with earlier media are used in Internet delivery. In the United States in 2011, it was found that a third of all the students enrolled in postsecondary education had taken an accredited online course in a postsecondary institution. Even though growth rates are slowing, enrolment for online courses has been seen to increase with the advance in technology. The majority of public and private colleges now offer full academic programs online. Distance education has a long history, but its popularity and use has grown exponentially as more advanced technology has become available. By 2008, online learning programs were available in the United States in 44 states at the K-12 level. Internet forums, online discussion group and online learning community can contribute to an efficacious distance education experience. The Web affords interaction in many modalities.

\_

In figure below, we see the common forms of media used in distance education charted against their capacity to support independence (of time and place) and their capacity to support interaction. It can be seen that, generally, the higher and richer the form of communication, the more restrictions it places on independence.

\_\_

Open University and Open Education:

Open University is in contrast to Campus University providing open education in contrast to campus education. The Open University revolutionized the scope of the correspondence program and helped to create a respectable learning alternative to the traditional form of education. It has been at the forefront of developing new technologies to improve the distance learning service as well as undertaking research in other disciplines. All “open universities” use distance education technologies as delivery methodologies though some require attendance at local study centres or at regional “summer schools”. Some open universities have grown to become ‘mega-universities’, a term coined to denote institutions with more than 100,000 students. The conventional merit-system degree is currently not as common in open education as it is in campus universities, although some open universities do already offer conventional degrees such as the Open University in the United Kingdom. Presently, many of the major open education sources offer their own form of certificate. Due to the popularity of open education, these new kind of academic certificates are gaining more respect and equal “academic value” to traditional degrees. Many open universities are working to have the ability to offer students standardized testing and traditional degrees and credentials. A culture is beginning to form around distance learning for people who are looking to social connections enjoyed on traditional campuses. For example, students may create study groups, meetups and movements such as UnCollege. Open education is fast growing to become the dominant form of education, for many reasons such as its efficiency and results compared to traditional methods. Many large university institutions are now starting to offer free or almost free full courses such as Harvard, MIT and Berkeley teaming up to form edX. Other universities offering open education are Stanford, Princeton, Duke, Johns Hopkins, Edinburgh, U. Penn, U. Michigan, U. Virginia, U. Washington, and Caltech. It has been called the biggest change in the way we learn since the printing press. Despite favorable studies on effectiveness, many people may still desire to choose traditional campus education for social and cultural reasons.

\_

Synchronous vs. asynchronous distance education:

Although the expansion of the Internet blurs the boundaries, distance education technologies are divided into two modes of delivery: synchronous learning and asynchronous learning. In synchronous learning, all participants are “present” at the same time. In this regard, it resembles traditional classroom teaching methods despite the participants being located remotely. It requires a timetable to be organized. Web conferencing, videoconferencing, educational television, instructional television are examples of synchronous technology, as are direct-broadcast satellite (DBS), internet radio, live streaming, telephone, and web-based VoIP. Web conferencing software such as Adobe Connect help to facilitate meetings in distance learning courses and usually contain additional interaction tools such as text chat, polls, hand raising, emoticons etc. These tools also support asynchronous participation by students being able to listen to recordings of synchronous sessions. Immersive environments (notably SecondLife) have also been used to enhance participant presence in distance education courses. Another form of synchronous learning that has been entering the classroom over the last couple of years is the use of robot proxies including those that allow sick students to attend classes. In asynchronous learning, participants access course materials flexibly on their own schedules. Students are not required to be together at the same time. Mail correspondence, which is the oldest form of distance education, is an asynchronous delivery technology, as are message board forums, e-mail, video and audio recordings, print materials, voicemail, and fax. The two methods can be combined. Many courses offered by both open universities and an increasing number of campus based institutions use periodic sessions of residential or day teaching to supplement the sessions delivered at a distance. This type of mixed distance and campus based education has recently come to called “blended learning” or less often “hybrid learning”. Many open universities uses a blend of technologies and a blend of learning modalities (face-to-face, distance, and hybrid) all under the rubric of “distance learning.” Distance learning can also use interactive radio instruction (IRI), interactive audio instruction (IAI), online virtual worlds, digital games, webinars, and webcasts, all of which are referred to as e-Learning. Media psychology and media studies have evolved as research focii in the study of media effects. Each has grown into important academic areas with graduate degree programs now providing professional research, teaching and field staff to help build understanding of the behavioral implications of media. The first MA, PhD and EdD programs in Media Psychology and Media Studies were launched in 2002 by Bernard Luskin at Fielding Graduate University.

\_

Advantages of distance learning:

1. You can pursue a job along with studies: A major chunk of students who actually opt for distance education are those who don’t want to give up their jobs but want a higher education, too. You can study on the weekends, when you’re back from work or even in the middle of the night. You get to learn while you earn!

2. You can save money: For any given program, the fee of a distance education degree (online or otherwise) may be much more affordable than the fee of a regular on-campus degree. Students who are looking for economically viable options can go for a distance learning program.

3. You save time: There’s no time wasted in going to and from college, no time wasted waiting for a bus or train. In a distance learning program, your classroom is right in your bedroom – the study material on your desk or the e-material on your computer. Students who don’t have enough time on their hands can turn to distance education as an option and pursue it from the comfort of their homes.

4. You can learn at your own pace: The prospect of going back to classroom education can be intimidating for many of us. Asking a question or revealing that you are unable to grasp a concept in class can be quite embarrassing for many students. Distance education comes to your rescue here! If you are self-disciplined and self-motivated, the best benefit of distance education is that you can learn at your own pace. It’s a known fact that different people learn in different ways and at different speeds. In a classroom, when everyone is being taught together, it is often difficult to have every student on the same page. Some students are too shy to raise their doubts in class. This is where distance education has an advantage over a regular campus program. Since you are given all course work beforehand, you can study as much or as little as you want every day, as long as you complete your study material within the stipulated time. If you’ve doubts or queries, there are discussion forums, chat facilities with faculty and complete support from the distance education provider.

5. You can study whenever, wherever: Except in scenarios where you have to attend an online tutorial at a given time or a lecture through videoconferencing, you can pretty much study whenever you want to, wherever you choose to. You need not be stuck in a classroom, but can go study in your garden, on your living room couch or in the comfort of your own bed. Irrespective of whether you’re a morning lark or a night owl, you can choose an optimum time to study whenever you’re at your productive best.

6. Gaining recognition among employers: Distance education over the years has finally found some acceptance and recognition among employers, which is an encouraging sign. As long as the distance learning program is accredited, you need not be worried. Private sector employers also value a distance education degree now, and even encourage employees to pursue higher education along with their job so that employees can develop skills and expertise in their field of work.

\_\_

Disadvantages of distance learning:

1. Chances of distraction high: With no faculty around for face-to-face interaction and no classmates who can help with constant reminders about pending assignments, the chances of getting distracted and losing track of deadlines are high. You need to keep yourself motivated and focused if you want to successfully complete your distance learning course. Distance education is not a good idea if you tend to procrastinate and can’t stick to deadlines.

2. Hidden costs: Although the cost of a distance education program is usually cheaper than a regular program, there can be hidden costs involved. For example, if your distance learning course is offered online, you might have to incur some initial expenses like installing a computer and getting a reliable Internet connection. You may need to buy additional resources such as a printer, a web camera and so forth. Some expenses might be recurring, like maintenance and electricity costs.

3. Complicated technology: Overdependence on technology can be a major drawback in distance learning mode of education, especially when the learning takes place in an online environment. Any malfunctioning software or hardware can bring an ongoing class to a standstill and interrupt the learning process. Similarly, if a student is not computer and tech savvy, his learning experience can be dissatisfactory.

4. Quality of faculty compromised: Often considered to be the lesser cousin of regular education, distance education is often plagued by lack of enough good quality faculty members. In other cases, even if the instructor is good, he or she may not be comfortable with teaching in an online environment. Sometimes the technology might not do full justice to the delivery and design of the course. A student loses out in all these scenarios. Distance education providers should realise that it is not the technology, but good and effective teachers that teach students.

5. Questionable credibility of degrees: Even though distance and online education is starting to get recognition, there are still a lot of fraudulent and non-accredited degrees being offered. With the increase in the number of distance/online programs, the number of scam operators are also rising. This affects the credibility of recognised distance learning degrees among prospective employers.

6. Lose out on networking: The advantages of pursuing a regular programme go beyond just interaction with teachers and good course content. MBA graduates from premier business schools would vouch for the fact that the opportunities to network with established alumni, renowned faculty and industry heads go a long way in paving a secure career. A distance learning program loses out on this very important aspect.

\_\_\_\_\_\_

Online learning (online education):

Online education is a type of distance learning— taking courses without attending a brick-and-mortar school or university. Instead, online students and teachers interact over the Internet. According to the U.S. Department of education, online learning is learning that is undertaken on a computer by means of the Internet. In a recent survey of 1,021 experts, 60% agreed that by 2020 there will be mass adoption of teleconferencing and distance learning.

\_

Tools used for online education:

\_

Comparison of online vs. face-to-face learning:

Face to Face Online

Communication Verbal and nonverbal Virtual through videos and chat forums, downloads and uploads

Learning Materials Real time access to Textbooks and lecture notes Textbooks, E-books, Lecture notes available 24/7

Additional Costs Fuel, parking (accommodation at times) Hardware and software, upgrades

Process of Learning Real Time and specific time frames for discussions Virtual any time

Feedback and Interaction Immediate through visual and verbal models, but time constrained Anytime but conducive to Lecturers availability, usually a 24hr turn around time

\_

Choosing Between Online and Face-to-Face Courses:

In continually expanding the supply of online course sections (and potentially curtailing face-to-face offerings), college administrators believe they are serving the needs and demands of their students. Yet researchers have neglected to ask students whether the continued provision of face-to-face courses is important to them. A study discusses community college students’ experiences with online and face-to-face learning, as well as their reasons for selecting online versus face-to-face sections of specific courses. Students reported that online courses had lower levels of instructor presence and that they thus needed to “teach themselves” in these courses. Accordingly, most students preferred to take only “easy” academic subjects online; they preferred to take “difficult” or “important” subjects face-to-face. The results of this research suggest that colleges need to take care to avoid curtailing the availability of face-to-face course sections, particularly in academically challenging or advanced areas of study.

\_

The prevalence of online courses has given rise to online degrees. However, research shows that employers do not value online degrees as much as they do degrees earned through traditional instruction. Studies show employers overwhelming prefer candidates with traditional degrees over online degrees. If this is the case, students who earn their degrees online are at a disadvantage when seeking employment. One explanation is that with the boom of so many online degree-granting institutions, some have been fraudulent establishments and others have been organizations that have not been accredited. Employers, therefore, question the education and training of students who have earned their degrees from unfamiliar institutions.

\_

Defining and valuing interaction in Online Learning:

Communication technologies are used in education to enhance interaction between all participants in the educational transaction. Interaction has always been valued in distance education, even in its most traditional, independent study format. Holmberg (1989) argued for the superiority of individualized interaction between student and tutor when supported by written postal correspondence or by real-time telephone tutoring. Holmberg also introduced us to the idea of simulated interaction that defines the writing style appropriate for independent study models of distance education, programming that he referred to as “guided didactic interaction.” Bates (1991) argued that interactivity should be the primary criterion for selecting media for educational delivery. Interaction can also be delineated in terms of the actors participating in it. Michael Moore first discussed the three most common forms of interaction in distance education: student-student, student-teacher, and student-content (Moore, 1989). This list was expanded by Anderson and Garrison (1998) to include teacher-teacher, teacher-content, and content-content interaction. Figure below illustrates these six types of educational interaction, and each is described briefly below.

\_

Educational interactions in online learning:

\_

1. Student-student Interaction:

Peer interaction is critical to the development of communities of learning that allow learners to develop interpersonal skills, and to investigate tacit knowledge shared by community members as well as a formal curriculum of studies.

2. Student-teacher Interaction:

Student-teacher interaction is supported in online learning in a large number of varieties and formats that include asynchronous and synchronous communication using text, audio, and video. The facility of such communications leads many new teachers to be overwhelmed by the quantity of student communications and by the rise in students’ expectations for immediate responses.

3. Student-content Interaction:

Student-content interaction has always been a major component of formal education, even in the form of library study or the reading of textbooks in face-to-face instruction. The Web supports these more passive forms of student-content interaction, and also provides a host of new opportunities, including immersion in microenvironments, exercises in virtual labs, online computer-assisted tutorials, and the development of interactive content that responds to student behavior and attributes.

4. Teacher-teacher Interaction:

Teacher-teacher interaction creates the opportunity for professional development and support that sustains teachers through communities of like-minded colleagues. These interactions also encourage teachers to take advantage of knowledge growth and discovery in their own subject and within the scholarly community of teachers.

5. Teacher-content Interaction:

Teacher-content interaction focuses on the creation of content and learning activities by teachers. It allows teachers continuously to monitor and update the content resources and activities that they create for student learning.

6. Content-content Interaction:

Content-content interaction is a newly developing mode of educational interaction in which content is programmed to interact with other automated information sources, so as to refresh itself constantly, and to acquire new capabilities. For example, a weather tutorial might take its data from current meteorological servers, creating a learning context that is up-to-date and relevant to the learner’s context. Content-content interaction is also necessary to provide a means of asserting control of rights and facilitating tracking of the use of content by diverse groups of learners and teachers.

\_

Online schools and Virtual schools:

Some schools offer remote access to their classes over the Internet. Online schools also can provide support to traditional schools, as in the case of the School Net Namibia. Some online classes also provide experience in a class, so that when people take them, they have already been introduced to the subject and know what to expect, and even more classes provide High School/College credit allowing people to take the classes at their own pace. Many online classes cost money to take but some are offered free. A virtual school or cyber-school describes an institution that teaches courses entirely or primarily through online methods. It has been suggested that a virtual school is an online learning platform offered by an educational organization whereby individuals can earn credits in the particular area of interest which can be counted toward graduation or advancement to the next grade. A virtual university provides higher education programs through electronic media, typically the Internet. Some are bricks-and-mortar institutions that provide online learning as part of their extended university courses while others solely offer online courses. They are regarded as a form of distance education. The goal of virtual universities is to provide access to the part of the population who would not be able to attend a physical campus, for reasons such as distance — in which students live too far from a physical campus to attend regular classes; and the need for flexibility — some students need the flexibility to study at home whenever it is convenient for them to do so.

\_

Challenges of online education to colleges and universities:

\_

Advantages of online learning:

(1) Extendibility, Accessibility, and Suitability – Users can proceed through a training program at their own pace and at their own place. They can also access the training at any time, receiving only as much as they need. In other words, “just in time and just enough.”

(2) Quicker (and cheaper) turnaround of finished product.

(3) Collaborative and exploratory learning environments.

(4) Easy and affordable training delivery.

(5) Cross Platform – Basically, you can deliver your training course to any machine over the Internet or company intranet without having to develop a different course for each unique platform.

(6) Inexpensive worldwide distribution – Web based training (WBT) can be accessed from any computer anywhere in the world while at the same time keeping delivery costs down.

(7) Reduced technical support – Web-based training courses decrease some of the more “potent and deadly” technical support issues that often enshroud technology based training.

(8) Ease of content update – The changes you make to any of your content are immediately available to your learning audience across the world.

(9) Installation options on private networks for security or greater bandwidth. If you opt for intranet delivery, you have more control over plug-ins and bandwidth, giving you more options for inclusion in your WBT.

(10) Travel cost and time savings – Learning is delivered directly to the learner instead of the other way around.

(11) Web browsers and Internet connections are widely available – Most computer users have access to a browser, such as IE4 or Netscape and are connected to a company’s intranet, and/or have access to the Internet.

(12) WBT-based development is easier to learn and pick up then CBT-based development. You should be able to draw from a larger pool of WBT developers than is available for creating traditional CBT (computer based training).

(13) Vast, untapped market for training – The untapped WBT market is still large. If you’re looking for commercial markets, the Internet also offers a huge audience hungry for material via the Net.

(14) Access is controllable – You can direct and monitor who receives web training – when, how many times, and in what sequence.

(15) Billing options – You can bill— and collect on that bill— through Net distribution, billing by user ID, number of accesses, date/time of access, or any other means by which you want to assess usage.

(16) Direct access to many other training resources – The Internet gives access to the largest library in the world. Capitalize on the offerings that have already been created, and use them to enhance the learning you are distributing.

\_

Disadvantages of online learning:

(1) Limited formatting of content in current browsers – The WBT you create will not resemble the CBT you might be familiar with because of Net bandwidth constraints. So if your content relies on a lot of media or particular formatting, the Net might not be the best delivery medium.

(2) Bandwidth/browser limitations may restrict instructional methodologies – Again, you are constrained by the technology. If your content relies on a lot of video, audio, or intense graphics, and your audience isn’t on a T1 line, Net delivery will only frustrate your learners.

(3) Limited bandwidth means slower performance for sound, video, and large graphics. Know the bandwidth available to your audience— and what’s reasonable “wait” time for them— before you commit to the Net.

(4) Someone must provide web server access, control usage, and bill users (if applicable) – The Net doesn’t magically solve all of your resource issues. Plan on having someone oversee some of these issues.

(5) Time required for downloading applications – Your training might be great, but if your audience isn’t patient enough to wait for it to download, online learning will not occur.

(6) Student assessment and feedback is limited – The Internet provides a wonderful means to get all kinds of information back and forth to your audience, but it also makes it harder to assess some types of student feedback and information.

(7) Many, if not most, of today’s web-based training programs are too static, with little if any interactivity – This is probably due to the bandwidth limitation, but if we deliver poor, page-turning training, we can’t expect stellar results from our learners.

(8) Cannot design and develop robust multimedia courses – The bandwidth limitations of the Net constrain what can be delivered effectively.

(9) Are computers replacing human contact? – The Net is not right for all training.

(10) Newness – It may take longer designing and developing WBT courses, the first time around. Because of its recent emergence to the training arena, new technologies always require time, experience, and money in order to take full advantage of its capabilities. The great thing, however, is you’ll learn new skills and knowledge with each new course.

(11) Web-based training has high-fixed costs – Some people assume that since you don’t need a CD-ROM drive, you have no additional costs. Not so. It’s important that you consider doing a pilot before proceeding further into the WBT game. Validate what works well, when, and at what it cost.

\_\_\_\_

M-learning:

\_

M-learning or mobile learning is defined as “learning across multiple contexts, through social and content interactions, using personal electronic devices.”. A form of distance education, m-learners use mobile device educational technology at their time convenience. M-learning technologies include handheld computers, MP3 players, notebooks, mobile phones and tablets. M-learning focuses on the mobility of the learner, interacting with portable technologies. Using mobile tools for creating learning aids and materials becomes an important part of informal learning. M-learning is convenient in that it is accessible from virtually anywhere. Sharing is almost instantaneous among everyone using the same content, which leads to the reception of instant feedback and tips. This highly active process has proven to increase exam scores from the fiftieth to the seventieth percentile, and cut the dropout rate in technical fields by 22 percent. M-learning also brings strong portability by replacing books and notes with small devices, filled with tailored learning contents.

\_

\_

Mobile devices can be used in brick-and-mortar or online settings to enhance learning experiences.

•The mobile phone (through text SMS notices) can be used especially for distance education or with students whose courses require them to be highly mobile and in particular to communicate information regarding availability of assignment results, venue changes and cancellations, etc. It can also be of value to business people, e.g. sales representatives who do not wish to waste time away from their busy schedules to attend formal training events.

•Mobile devices facilitate online interaction between instructor and student, and student to student.

•Blended learning takes the classroom out of a traditional brick-and-mortar setting. Students become part of virtual communities used for collaboration. Blended learning transitions away from a traditional teaching environment to a customized and interactive web platform for the user.

\_

Mobile devices in the classroom can be used to enhance group collaboration among students through communication applications, interactive displays, and video features:

•Existing mobile technology can replace cumbersome resources such as textbooks, visual aids, and presentation technology.

•Interactive and multi-mode technology allows students to engage and manipulate information.

•Mobile Device features with WIFI capabilities allow for on-demand access to information.

•Access to classroom activities and information on mobile devices provides a continuum for learning inside and outside the classroom.

\_

Benefits of M-learning:

•Relatively inexpensive opportunities, as the cost of mobile devices are significantly less than PCs and laptops

•Multimedia content delivery and creation options

•Continuous and situated learning support

•Decrease in training costs

•Potentially a more rewarding learning experience

•New opportunities for traditional educational institutions

•Readily available a/synchronous learning experience

\_

Challenges of M-learning:

Technical challenges include:

•Connectivity and battery life

•Screen size and key size

•Meeting required bandwidth for nonstop/fast streaming

•Number of file/asset formats supported by a specific device

•Content security or copyright issue from authoring group

•Multiple standards, multiple screen sizes, multiple operating systems

•Reworking existing E-Learning materials for mobile platforms

•Limited memory

•Risk of sudden obsolescence

•Security

•Work/Life Balance

•Cost of Investment

Social and educational challenges include:

•Accessibility and cost barriers for end users: Digital divide.

•How to assess learning outside the classroom

•How to support learning across many contexts

•Content’s security or pirating issues

•Frequent changes in device models/technologies/functionality etc.

•Developing an appropriate theory of learning for the mobile age

•Conceptual differences between e-learning and m-learning

•Design of technology to support a lifetime of learning

•Tracking of results and proper use of this information

•No restriction on learning timetable

•Personal and private information and content

•No demographic boundary

•Disruption of students’ personal and academic lives

•Access to and use of the technology in developing countries

•Risk of distraction

\_\_\_\_\_\_

Podcasting:

Podcasting consists of listening to audio recordings of lectures. It can be used to review live lectures and to provide opportunities for students to rehearse oral presentations. Podcasts may also provide supplemental information to enhance traditional lectures. Psychological research suggests that university students who download podcast lectures achieve substantially higher exam results than those who attend the lecture in person (only in cases in which students take notes).

\_

Webcasting:

A webcast differs from a podcast because the recorded event usually includes live spectators in addition to an online audience. Webcasts might also include tools for audience interaction. The audience either watches online as the featured event occurs or downloads a recording afterward. Webcasting is a new instructional technology used to deliver audio and video presentations via the Internet, enabling learners to participate in a live class via a personal computer. Webcasts can be a beneficial technology and provide interactive medium for teachers and students to use in education. Businesses use webcasts to train employees about new protocols, for continuing education, or just to motivate and inspire. The biggest differences between podcasts and webcasts are how they are delivered to you and whether they are stored on your devices. Webcasts stream video over the Internet, meaning your device doesn’t store a copy of the video, so a constant Internet connection is required. Podcasts are downloaded directly to your computer, usually by media players with podcatchers. This means a connection is required only when downloading a new episode, and that the podcast episode is stored directly on your device.

\_\_\_\_\_\_\_

Social media and education:

Social media plays an important role in every student’s life. It is easier and convenient to access information, provide information and communicate via social media. Teachers and students are connected to each other and can make good use of these platforms for the working of their education. Social media helps professors to be connected to their students off campus as well as with their ex-students. Professors use social media as a way of teaching by creating groups and accounts for students where the information can be accessed. Professors can share ideas with each other and point students to LinkedIn and Facebook. Professors create hash tags that allow students to tag their academic posts, and view submissions to see what the collective has creatively produced. One of the main reasons behind professors adapting to social media in classrooms is that they can do marketing via social media. Not only they are able to make the work easy but also are branding themselves professionally, creating a name for them in the community. Facebook pages, twitter accounts, various blog sites and YouTube channels are the examples where you can see professors doing excel in their stream. These platforms are highly accessed and hence can help professors in getting the high reputation. Who wouldn’t want that? Get known for your work while working! In a survey by Babson survey research group and Pearson, 4,000 teaching faculty from all disciplines in higher education, representing U.S. higher education professors, examined both the personal and professional impacts of social media. According to the report, key findings were:

•64.4 percent of faculty use social media for their personal lives, 33.8 percent use it for teaching.

•41 percent for those under age 35 compared to 30 percent for those over age 55 reported using social media in their teaching.

•Faculty in the Humanities and Arts, Professions and Applied Sciences, and the Social Sciences use social media at higher rates than those in Natural Sciences, Mathematics and Computer Science.

•Blogs and wikis are preferred for teaching, while Facebook or LinkedIn are used more for social and professional connections.

•88 percent of faculty, regardless of discipline, reported using online video in the classroom.

\_

Facebook and education:

Facebook claims that students and teachers can productively co-exist and interact on the social network, and even claims that it is a vital tool for teaching and learning in the 21st century. Last year, the company teamed up with the Education Foundation to produce a ‘Guide for Educators’, to explain why Facebook is a good platform for collaboration within and beyond the classroom. Today’s teens were born into a digital world. They are connecting, sharing and learning through the latest advances in technology. This is creating a vibrant world full of interactivity and learning, where young people make new things and connect in ways that enrich their lives in the classroom and in their communities. By all accounts, teens are mindful of how to behave and interact using social media. Still, the adults in teen’s lives – the parents, the educators, the community leaders — need to be supportive partners, assisting teens as they navigate safety, privacy, digital literacy and citizenship. That means that they need to understand the digital world – and Facebook, in particular. The Facebook for Educators and Community Leaders Guide provides resources to help you do that.

\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_

Online education vs. Face-to-Face education:

With the advancement in learning technologies, online instruction has become popular these days. Learners who follow online instruction are expected to engage in a self-paced learning strategy; and in addition, they are expected to engage in a variety of online communications such as asynchronous (or synchronous) interaction with other learners and instructor, virtual fieldtrips, email, and voice communication through internet audio streaming. The nature of collaborative learning within the online course design normally encourages group participation to generate online group project or ideas to solve an issue. In contrast, face-to-face instruction requires academic staff to give lectures and have students attend face-to-face tutorial. This face-to-face instruction requires lecturers to engage in interpersonal contact, social contact, and non-verbal communication with students. It is possible that direct contact with the instructor in traditional face-to-face settings may still contain some stigma that prevents students from communicating freely with their instructor. An interview with a few students at University Malaysia Sarawak (UNIMAS) showed that they were dissatisfied with some online courses offered that were merely lectures notes placed online. This indicates that more effort is required in designing a learning environment which should represent an integral part of the development of a quality online course content. The study reported by Schutte(1966) indicated that the virtual class mode of delivery was superior to the traditional classroom in learning social statistics. Students were motivated to engage in the new technology of virtual class as they spent more time in completing their class work in the virtual environment than the traditional group. In contrast, Smith and Taylor (1995) reported no significant difference in the mastery of a physics course that was presented to students either in web version or lecture version. Collins (2000) compared web, correspondence and lecture versions of a second-year Biology course over four different semesters. Analysis on the course evaluation revealed that students in the web version were satisfied with the web approach though they did not score better than students in the correspondence version nor the students in the lecture version in the final test. There is, however, opposing view concerning a comparative study involving a computer media and a traditional mode of learning. Lockee, Moore and Burton (2001) argued against the use of media comparison studies. They identified a range of variables (such as learner characteristics, media attributes, instructional strategy choices, and psychological theories) in the comparison studies which made the comparative design inadequate to justify the learning effects of the two instructions. That is, it is difficult to establish the cause and effect of the comparative design because it is almost impossible to match the variables for the participants in a comparison study. In sum, research evidences point to two different views in evaluating computer mediated learning environment. Several researchers adopted an evaluation strategy emphasizing learners’ satisfaction and learning outcomes of the course design. Other researchers compared the effectiveness of online course and a traditional face-to-face course with the intention of replacing online course with traditional course should the former supersedes the latter.

\_

Online vs. face to face learning: A 2002 Malaysian study:

Test results indicate that online group performed slightly better than face-to-face group on case studies only. It seems that the online group was not disadvantaged despite frequent interruptions of power and server failures in the campus. The positive online learning effect may owe to its different types of interactions (learner-content, learner-self, learner-learner and instructor-learner). This various types of learning interaction may foster a more self-oriented and group-oriented learning experience than the face-to-face instruction (Maher, 1998). As a consequence, this self-oriented and group-oriented learning experience promotes learning (especially the online case studies) more than face-to-face instruction. In contrast, face-to-face class did not provide opportunity for every student to interact with the lecturer when the lecture was conducted. Due to nature of traditional lecture, only some students were given the opportunity to respond to the multiple choice exercises incorporated in the lecture notes. Whereas all students in online group were encouraged to participate the online discussion topics, students in face-to-face group worked in separate groups with each group discussed one tutorial topic only.

\_

Comparing perceived Formal and Informal learning in Face-to-Face versus Online Environments: 2010 study:

Two hundred and thirty-nine elementary school teachers reported their perceived learning (cognitive and affective aspects) in four learning environments: Formal – face-to-face (teachers’ professional development courses), Informal – face-to-face (teachers’ lounge), Formal – online (online teacher professional development courses), and Informal – online (teachers’ online forum). Authors found that perceived learning in formal learning environments was higher than in informal learning environments. The effect of communication media was also significant; teachers who communicated online reported higher perceived learning than teachers who communicated face-to-face. The interaction between formality and communication media was also significant. In the informal environments, online learners perceived their learning to be higher than face-to-face learners, whereas in formal learning environments there was no such difference. These results revealed the importance of the medium in different learning environments.

\_

Overexposure to computers and the Internet causes educational outcomes to drop: a 2015 study finds:

Beefing up technology in the classroom doesn’t always lead to better education for children, according to a new study from an international consortium presented recently. The report from the Organization for Economic Cooperation and Development, or OECD, tracked educational outcome among students based on their use of technology at home and in the classroom. While student performance improves when they use technology in moderation, the group found, overexposure to computers and the Internet causes educational outcomes to drop. Despite considerable investments in computers, Internet connections and software for educational use, there is little solid evidence that greater computer use among students leads to better scores in mathematics and reading. The report suggested that “we have not yet become good enough at the kind of pedagogues that make the most of technology; that adding 21st century technologies to 20th century teaching practices will just dilute the effectiveness of teaching.” Report results are based on an assessment in 2012 that tracked students in more than 40 countries and surveyed them on computer habits and conducted both written and digital tests. On average, seven out of 10 students in countries surveyed use computers at school and students average at least 25 minutes a day online. In some countries, like Turkey and Mexico, about half of the students don’t have access to a computer at home. The survey found that students with more exposure to computers do better, on average, than those with little exposure to computers, but the OECD cautioned against drawing conclusions based on that result. The data could simply reflect that school systems that invest in technology also invest in better teachers and draw on students from a higher socio-economic class, who tend to do better in school. Countries with low expenditures on education, and low per-capita income, tend to have fewer computers per student. While student access to computers leads to overall better performance in the classroom, how those computers are used and the amount of time spent on them have a great effect on performance as well. Students who use computers for schoolwork, but do so for a slightly below-average amount of time, performed better than average on both written and digital reading tests, according to the survey. And students who spend an above-average amount of time in front of a computer at school performed the worse than other students, including those who might not use them at all. In mathematics tests, the survey found that almost any time spent on the computer led to poorer performance on both written and digital tests. Researchers found much the same results when students used computers for homework. They also found that students who used computers excessively were more likely to feel isolated or alone. Technology can amplify good teaching but it can’t replace poor teaching. If students are just sitting in front of computers cutting and pasting from Google, they could likely spend that time more effectively elsewhere. The conclusion that emerges is that schools and education systems are, on average, not ready to leverage the potential of technology. Technology often increases the efficiency of already-efficient processes, but it may also make inefficient processes even more so. Technology can’t help students without proper support and a good plan in the classroom. If you give kids a tool and don’t show them how to effectively use it, then it’s not going to make much of a difference.

\_\_\_\_\_\_\_

Is digital education the answer to India’s education dilemma?

India is promoting digital technology as the tool to solve all the evils in the current education system. However, global studies show that merely distributing laptops among students is no solution. It is critical to have a carefully designed school curriculum that seamlessly blends conventional blackboard-teaching with digital means. Smart blended learning techniques and leveraging the power of digital technology is the best and arguably the only way forward. A smart blend of online & offline teaching methods with digital technologies closing the gaps that a traditional structure throws up is the best way to tackle the impending education crisis in developing nations.

\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_

Foreign and international education:

\_

Foreign education (studying abroad):

For those who have not travelled extensively, studying abroad may be an ideal opportunity to seek adventure with the support network of an established program. Students who wish to learn a foreign language – or develop existing foreign language skills – and immerse themselves in a new culture will also find it beneficial. Furthermore, students considering a career in international relations should definitely study abroad, as it can increase job prospects upon graduation. In contrast, however, studying abroad is less suitable for students who have strong attachments to their hometown and are wary of being far apart from family and friends.

\_

Studying Abroad: The Benefits:

Higher education experts around the world share what they believe to be the main benefits of studying abroad including experience in a global hub, and developing language skills via immersion in an international experience, as well as key factors to consider when choosing a location for your studies.

1. Experience a new culture:

The best way of finding out about another culture is by immersing yourself in it, and you can only do that by living in a country. Students will often pursue a master’s degree at a foreign institution to gain a unique cultural experience while acquiring new skills.

2. See the World:

The one reason you should consider a study abroad program is the opportunity to see the world. By studying abroad, you will experience a brand-new country with incredible new outlooks, customs and activities. The benefits of studying abroad include the opportunity to see new terrains, natural wonders, museums and landmarks of your host nation.

3. Education:

Another reason you might consider studying abroad is for the chance to experience different styles of education. By enrolling in a study abroad program, you’ll have the chance to see a side of your major that you may not have been exposed to at home. You’ll find that completely immersing yourself in the education system of your host country is a great way to really experience and understand the people, its traditions, and its culture. Education is the center piece of any study abroad trip—it is, after all, a study abroad program—and choosing the right school is a very important factor. Being part of an internationally diverse academic community can also enhance the quality of your learning, providing a wider spectrum of opinions and expertise.

4. Find New Interests:

If you are still questioning why to study abroad, you should know that studying in a different country offers many new activities and interests that you may never have discovered if you’d stayed at home. You might find that you have an as-yet undiscovered talent for hiking, water sports, snow skiing, golf, or various other new sports you may never have tried back home.

5. Make friends from around the world:

It’s likely that the university you choose for your international studies will have a large community of students both from the local area and all around the globe. If you take full advantage of this opportunity, you could graduate having established lasting friendships with people based in many different countries – great for future trips, and also a good basis for an international professional network. Spending time studying abroad can provide an excellent opportunity to make new contacts and build invaluable relationships with peers from around the world.

6. Become truly independent:

The experience of university is, for most new students, a steep learning curve in gaining independence. But studying abroad takes that a whole step further, challenging students to really develop as individuals. You obviously have to cope on your own when you are studying abroad. You have to be able to look after yourself and sort out your own affairs.

7. Personal Development:

There is nothing quite like being on your own in a foreign country. You might find that studying abroad really brings out your independent nature. Students who study abroad become explorers of their new nation and really discover the curiosity and excitement that they harbor. A benefit to studying abroad is the opportunity to discover yourself while gaining an understanding of a different culture. Being in a new place by yourself can be overwhelming at times, and it tests your ability to adapt to diverse situations while being able to solve problems.

8. Change the way you think:

Studying abroad may well change the way you view all kinds of things which you’d previously taken for granted. Studying abroad provides an opportunity to expand one’s field of view and helps one to understand and analyze problems and phenomena from a longer-term, worldwide perspective. Moreover, long-term experience in other cultures has a tendency to help one think objectively about oneself and one’s home country, tolerate differences, and recognize and appreciate diversity.

9. Get ready for an international workplace:

Students are more open to new knowledge and expertise when abroad, and that knowledge is often more easily applicable and adaptable to situations requiring international interaction; thus one can expect to be more competitive in today’s era of globalization. Employers are looking to graduates to have international experience either by studying or working abroad. Anyone who is able to put on their CV that they studied abroad is at a great advantage in terms of impressing future employers. At a very basic level it will give you something to talk about in an interview. But much more importantly it will prove to your potential employer that you have the ability to stand on your own two feet, that you can fit in when placed in different environments, and that you are resourceful and have initiative.

10. Career Opportunities:

When you finish your study abroad program and return home, you will return with a new perspective on culture, language skills, a great education, and a willingness to learn. Needless to say, all of these are very attractive to future employers.

11. Develop your language skills:

For many international students, studying abroad is a chance to develop language skills, either through studying in a second language or by practicing the language spoken locally. A growing number of courses around the world are taught in English, particularly at graduate level, and of course proficiency in English has many applications across all kinds of careers. But indeed any additional language skills are an asset. Language skills obtained while studying abroad will always be beneficial to the student and their home country in both the short- and long-term.

12. Study in a global hub for your field of interest:

Studying abroad is a great opportunity to spend time in a location which is known as a leading global hub in your field of interest. This could mean you may have opportunities to learn from renowned experts and guest speakers, and perhaps gain some impressive work experience. For example, those studying finance may be attracted to global hubs such as New York, London or Hong Kong, while those interested in politics may be looking at universities in major political centers such as Washington DC or Brussels. Some countries are especially well-known as leaders in a particular field of research and development, or a particular strand of education. Germany is synonymous with advances in engineering technology, the US with top business and management programs such as Harvard, MIT and Stanford, Australia screams art and design and sport, and Canada has its world-renowned ‘co-op programs’.

\_

International education:

International education can mean many different things and its definition is debated. Some have defined two general meanings according to its involvement of students. The first refers to education that transcends national borders by the exchange of people, for example, by students travelling to study at an international branch campus, as part of a study abroad program or as part of a student exchange program. The second is a comprehensive approach to education that intentionally prepares students to be active and engaged participants in an interconnected world. The International Baccalaureate defines the term according to criteria such as the development of citizens of the world in accordance to culture, language, and social cohesion, building a sense of identity and cultural awareness, encrypting recognition and development of universal human values, encourage discovery and enjoyment of learning, equip students with collectivist or individualistic skills and knowledge that can be applied broadly, encourage global thinking when responding to local situations, encourage diversity and flexibility in teaching pedagogies and supply appropriate forms of assessment and international benchmarking. Understanding of a broad array of phenomena is enhanced and deepened through examination of the cultures, languages, environmental situations, governments, political relations, religions, geography, and history of the world. While definitions vary in the precise language used, international education is generally taken to include:

•Knowledge of other world regions & cultures;

•Familiarity with international and global issues;

•Skills in working effectively in global or cross-cultural environments, and using information from different sources around the world;

•Ability to communicate in multiple languages; and

•Dispositions towards respect and concern for other cultures and peoples.

\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_

Development, democracy and education:

Note:

Please read my previous article “Development of nation” regarding role of education in development of nation:

\_

Right to education:

Article 29 (1), UN Convention on the Rights of the Child states that the education of the child shall be directed to:

(a) The development of the child’s personality, talents and mental and physical abilities to their fullest potential;

(b) The development of respect for human rights and fundamental freedoms, and for the principles enshrined in the Charter of the United Nations;

(c) The development of respect for the child’s parents, his or her own cultural identity, language and values, for the national values of the country in which the child is living, the country from which he or she may originate, and for civilizations different from his or her own;

(d) The preparation of the child for responsible life in a free society, in the spirit of understanding, peace, tolerance, equality of sexes, and friendship among all peoples, ethnic, national and religious groups and persons of indigenous origin;

(e) The development of respect for the natural environment.

\_\_\_\_\_

Challenges in education:

\_\_\_\_\_

Educational goals:

The United Nations Millennium Development Goals include some objectives pertaining to education:

•Achieve universal primary education in all countries by 2015

•Eliminate gender disparity in primary and secondary education by 2015

\_

The World Education Forum (Dakar 2000) agreed to reach 6 goals by 2015:

•expand early childhood care and education

•improve access to complete, free schooling of good quality for all primary school-age children

•greatly increase learning opportunities for youth and adults

•improve adult literacy rates by 50%

•eliminate gender disparities in schooling

•improve all aspects of education quality.

\_\_\_\_\_\_

Since 1909, the ratio of children in the developing world attending school has increased. Before then, a small minority of boys attended school. By the start of the 21st century, the majority of all children in most regions of the world attended school. Universal Primary Education is one of the eight international Millennium Development Goals, towards which progress has been made in the past decade, though barriers still remain. Securing charitable funding from prospective donors is one particularly persistent problem. Researchers at the Overseas Development Institute have indicated that the main obstacles to funding for education include conflicting donor priorities, an immature aid architecture, and a lack of evidence and advocacy for the issue. Additionally, Transparency International has identified corruption in the education sector as a major stumbling block to achieving Universal Primary Education in Africa. Furthermore, demand in the developing world for improved educational access is not as high as foreigners have expected. Indigenous governments are reluctant to take on the ongoing costs involved. There is also economic pressure from some parents, who prefer their children to earn money in the short term rather than work towards the long-term benefits of education.

Internationalization:

Nearly every country now has Universal Primary Education. Similarities — in systems or even in ideas — that schools share internationally have led to an increase in international student exchanges. International education is also a major part of international development. Professionals and students wishing to be a part of international education development are able to learn through organizations and university and college programs. Organizations around the world use education as a means to development. The European Socrates-Erasmus Program facilitates exchanges across European universities. The Soros Foundation provides many opportunities for students from central Asia and eastern Europe. Programs such as the International Baccalaureate have contributed to the internationalization of education. The global campus online, led by American universities, allows free access to class materials and lecture files recorded during the actual classes.

\_\_\_\_

Education as human resource development:

Human resources…constitute the ultimate basis for wealth of nations. Capital and natural resources are passive factors of production; human beings are the active agents who accumulate capital, exploit natural resources, build social, economic and political organizations, and carry forward national development. Most educational planners, serious commentators and economists would argue that major educational reforms within developing nations are now urgently needed; and that the determination and pace of a nation’s social and economic development are contingent on its human resources and not its capital or its materials resources. According to Frederick H. Harbinson, “A country which is unable to develop the skills and knowledge of its people and to utilize them effectively in the national economy will be unable to develop anything else.” In that regard, the formal education system has therefore been viewed as the principal institutional mechanism for developing knowledge, skills, values, attitudes and aspirations, and that will enable individuals to function effectively as agents of change in societies. It is the belief that the greater the emphasis and increase of these outcomes the more rapid the development. This reality has led many countries especially developing countries to commit to the rapid quantitative expansion of educational opportunities thereby increasing the enrolments at all levels of the school system.

\_\_\_

Education and development:

The evidence on why education should be afforded greater priority globally and nationally is clear and abundant. Education is the bedrock for sustainable development. Education is a human right and is essential to ensuring that children and youth become active citizens. It is a key ingredient for the implementation of any new comprehensive human development agenda and for reducing extreme poverty. Education is believed to be the bedrock of any country’s development. It is considered as the cornerstone for meaningful and sustainable growth development and achievement in art, science and technology. Arguing in the same direction, Umo (2005), had affirmed that, worldwide, education has been recognized as a catalyst for achieving socio-economic, scientific and technological development. For instance, Federal Government of Nigeria (2004) declared in its National Policy on Education that education is an instrument par excellence for achieving national development. In other words, any meaningful growth and development of any country must be preceded by a sound educational planning. Since education constituted an indispensable aspect of social realities of a nation, it is of cardinal importance to any society. The relationship between education and development cannot be debated without linking the structure of educational systems to the economic and social character of societies. That link between education and development is a two-way process. Educational systems, for the most part, reflect the socio-economic structures of the societies in which they function; whether egalitarian or in-egalitarian. There is also the tendency for educational systems to perpetuate, reinforce and even reproduce those economic and social structures. Paradoxically, educational reforms can significantly induce corresponding social and economic reforms in the societies. It is clear that there remained a large scale and apparently growing problem of illiteracy. It is also clear that economic and social development depended on bringing about changes in many people’s thinking. The development process is in fact an educational process, or rather it should unfailingly be viewed as such. We cannot therefore conceive of development in the absence of education any more than education in the absence of development. The importance of education for the development of a country must not be underestimated because education is the tool which alone can inculcate national and cultural values and liberate people of false prejudice, ignorance and representations. Education provides them required knowledge, technique, skill and information and enables them to know their rights and duties towards their family, their society and towards their motherland at large. Education expands their vision and outlook, provokes the spirit of healthy competition and a desire to advance for the achievements of their consciousness regenerating truth, and thereby capability to fight ignorance, injustice, corruption, violence, disparity and communalism, the greatest hazards to the progress of the nation. Education is thus a means to stir up the consciousness of the people against injustice, violence and disparity, generally resulting in unrest and violence.

\_\_\_\_\_\_\_

Education and democracy:

\_\_\_\_\_\_

Education for Sustainable Development:

Education for Sustainable Development allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. Education for Sustainable Development means including key sustainable development issues into teaching and learning; for example, climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development. Education for Sustainable Development consequently promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way. Education for Sustainable Development requires far-reaching changes in the way education is often practised today. Education is an agent for sustainable development. Education helps individuals to make decisions that meet the needs of the present without compromising those of future generations. Education for Sustainable Development addresses key issues such as poverty reduction, sustainable livelihoods, climate change, gender equality, corporate social responsibility and protection of indigenous cultures. It can help us to live sustainably. It aims to change the way we think, behave, look at the world, interact with nature and address social, economic and environmental problems. Governments are realizing this: according to a recent survey, 79 countries now have a national Education for Sustainable Development coordination body.

\_\_\_\_\_

What is development education?

Development education in youth work aims to support young people to increase their awareness and understanding of the interdependent and unequal world in which we live, through a process of interactive learning, debate, action and reflection. It challenges perceptions of the world and encourages young people to act for a more just and equal society at a national and an international level.

Development education in youth work is about…

•Justice

•Global development

•Starting from young people’s experiences

•Human rights

•Global citizenship

•Listening to young people

•Exploring the connections between young people in Ireland and the Majority World

•Understanding the causes and consequences of global poverty and inequality

•Learning from and sharing with people in the Majority World

•Understanding how our actions affect people in the Majority World

•Justice rather than charity

•Learning through participation and action

•Challenging stereotypes and prejudice

•Respecting different cultures and challenging the dominance of one culture over another

•Having Fun

•Learning how countries depend on each other

•Solidarity with people who are poor, marginalised or discriminated against

•Concern for the environment

•Celebrating the diversity of people in our world

•Enabling young people to imagine a better world

•Taking action for a more just and fair world

\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_

Education and economy:

\_

Economics of education:

It has been argued that high rates of education are essential for countries to be able to achieve high levels of economic growth. Empirical analyses tend to support the theoretical prediction that poor countries should grow faster than rich countries because they can adopt cutting edge technologies already tried and tested by rich countries. However, technology transfer requires knowledgeable managers and engineers who are able to operate new machines or production practices borrowed from the leader in order to close the gap through imitation. Therefore, a country’s ability to learn from the leader is a function of its stock of “human capital”. Recent study of the determinants of aggregate economic growth has stressed the importance of fundamental economic institution and the role of cognitive skills. At the level of the individual, there is a large literature, generally related to the work of Jacob Mincer, on how earnings are related to the schooling and other human capital. This work has motivated a large number of studies, but is also controversial. The chief controversies revolve around how to interpret the impact of schooling. Some students who have indicated a high potential for learning, by testing with a high intelligence quotient, may not achieve their full academic potential, due to financial difficulties. Economists Samuel Bowles and Herbert Gintis argued in 1976 that there was a fundamental conflict in American schooling between the egalitarian goal of democratic participation and the inequalities implied by the continued profitability of capitalist production.

\_\_\_\_\_\_\_

Education, the most powerful investment in our future:

Investing in education isn’t just the right thing to do, its smart economics. Education can put people on a path towards good health, empowerment and employment. It can help to build more peaceful societies. And the benefits of girls’ education extends to their own children who are often healthier and more educated because their mothers went to school. Evidence shows that, on average, each additional year of education boosts a person’s income by 10 per cent and increases a country’s GDP by 0.37 to 0.58 per cent. Some researchers estimate that if every child learned to read, around 170 million fewer people would live in poverty. Yet, there’s an education crisis. In 2015, more than 120 million children are out of school. And worse, we face a learning crisis. An estimated 130 million children cannot read or count despite reaching Grade 4. On top of that, the children who would most benefit from an education are those most denied it through no fault of their own. Perhaps their families are poor. Perhaps they live with disabilities and cannot access school. Perhaps they live in remote areas or belong to nomadic communities. More than half of the children who don’t go to school live in conflict-affected countries. This is especially sad. Education can offer them safety and the opportunity to learn skills that will help them to heal wounds and rebuild their societies. So, what do we have to do to get more children in school and learning? These issues, and more, are addressed in a new UNICEF report:

The Investment Case for Education and Equity:

First, we must invest more in education. We need $26 billion more to get children in school and learning.

Second, we must invest more effectively: in learning; expanding preschool; abolishing school fees; improving learning assessment; and being more accountable to communities for education results.

And third, we must invest more equitably. So that the children who are most in need have access to quality learning.

Consider this: on average, in low-income countries, about half of all public education resources are allocated to the 10% of students that are most educated. Resources to the wealthiest quintile of children are up to 18 times larger than those to the poorest quintile. That is wrong. We cannot, we must not, ignore this injustice. This knowledge must be an impetus for changing the way we finance global education. The Investment Case for Education and Equity calls for urgent action. The report suggests that we:

•allocate more resources to education in the early grades;

•target resources to the poorest areas and most marginalized children;

•establish policies and methods that improve spending efficiency; and

•strengthen learning assessment systems and implement accountability measures that involve parents and communities. There is no time to lose. Educated children are at the heart of healthy, productive and prosperous societies. If that is the future we want tomorrow, we must invest today. And the challenge is growing. By 2030, over 600 million more children will need to be enrolled in school to achieve basic education for all.

\_\_\_\_\_

\_\_\_\_\_

Education as an investment:

Economics distinguishes in addition to physical capital another form of capital that is no less critical as a means of production – human capital. With investments in human capital, such as education, three major economic effects can be expected:

1. increased expenses as the accumulation of human capital requires investments just as physical capital does,

2. increased productivity as people gain characteristics that enable them to produce more output and hence

3. return on investment in the form of higher incomes.

\_

Investment costs:

Investments in human capital entail an investment cost, just as any investment does. Typically in European countries most education expenditure takes the form of government consumption, although some costs are also borne by individuals. These investments can be rather costly. EU governments spent between 3% and 8% of GDP on education in 2005, the average being 5%. However, measuring the spending this way alone greatly underestimates the costs because a more subtle form of costs is completely overlooked: the opportunity cost of forgone wages as students cannot work while they study. It has been estimated that the total costs, including opportunity costs, of education are as much as double the direct costs. Including opportunity costs investments in education can be estimated to have been around 10% of GDP in the EU countries in 2005. In comparison investments in physical capital were 20% of GDP. Thus the two are of similar magnitude.

\_

Returns on investment:

Human capital in the form of education shares many characteristics with physical capital. Both require an investment to create and, once created, both have economic value. Physical capital earns a return because people are willing to pay to use a piece of physical capital in work as it allows them to produce more output. To measure the productive value of physical capital, we can simply measure how much of a return it commands in the market. In the case of human capital calculating returns is more complicated – after all, we cannot separate education from the person to see how much it rents for. To get around this problem the returns to human capital are generally inferred from differences in wages among people with different levels of education. Hall and Jones have calculated from international data that on average that the returns on education are 13.4% per year for first four years of schooling (grades 1–4), 10.1% per year for the next four years (grades 5–8) and 6.8% for each year beyond eight years. Thus someone with 12 years of schooling can be expected to earn, on average, 1.1344 × 1.1014 × 1.0684 = 3.161 times as much as someone with no schooling at all.

\_\_

Effects on productivity:

Economy-wide, the effect of human capital on incomes has been estimated to be rather significant: 65% of wages paid in developed countries is payments to human capital and only 35% to raw labor. The higher productivity of well-educated workers is one of the factors that explain higher GDPs and, therefore, higher incomes in developed countries. A strong correlation between GDP and education is clearly visible among the countries of the world, as is shown by the figure above. It is less clear, however, how much of a high GDP is explained by education. After all, it is also possible that rich countries can simply afford more education. To distinguish the part of GDP explained with education from other causes, Weil has calculated how much one would expect each country’s GDP to be higher based on the data on average schooling. This was based on the above-mentioned calculations of Hall and Jones on the returns on education. GDPs predicted by Weil’s calculations can be plotted against actual GDPs, demonstrating that the variation in education explains some, but not all, of the variation in GDP. Finally, the matter of externalities should be considered. Usually when speaking of externalities one thinks of the negative effects of economic activities that are not included in market prices, such as pollution. These are negative externalities. However, there are also positive externalities – that is, positive effects of which someone can benefit without having to pay for it. Education bears with it major positive externalities: giving one person more education raises not only his or her output but also the output of those around him or her. Educated workers can bring new technologies, methods and information to the consideration of others. They can teach things to others and act as an example. Positive externalities from human capital are one explanation for why governments are involved in education. If people were left on their own, they would not take into account the full social benefit of education – in other words the rise in the output and wages of others – so the amount they would choose to obtain would be lower than the social optimum.

\_\_\_

A cursory examination of studies based on census data reveals that earnings increase with education and that the social rate of return to education is at least equal to the return available to society on other investments (Becker, 1964; H. Miller, 1960). The proposition that education can be treated as an investment in human capital has proved to be powerful and illuminating in its own right and to be a major ingredient in studies of the sources of economic growth and the distribution of income (Becker, 1964; Denison, 1964; H. Miller, 1960; Schultz, 1963). Central to all these studies are two testable hypotheses. First, the (observed or adjusted) differences in earnings by educational level represent the net effect of education, rather than some other personal characteristics that have not been held constant. Second, these differences in earnings represent increases in productivity produced by education.

\_

There is no greater financial investment in one’s future than a college degree. While this viewpoint has its critics, the reality is the value of a degree has never been greater. Despite public questions about a degree’s worth, the pay gap between college graduates and those without a degree reached a high in 2013, even with the slow recovery from the most severe recession in seventy-five years. According to new data, based on an analysis of Labor Department statistics by the Economic Policy Institute, Americans with four-year college degrees are not only equipped for a fulfilling adult and professional life but made 98 percent more an hour on average than those without a degree. And, the wage gap is only increasing, up from 89 percent five years ago, 85 percent a decade earlier, and 64 percent in the early 1980s. College graduates are also more likely to be employed full-time than their less-educated counterparts, and are less likely to be unemployed, 4 percent versus 12 percent, according to a survey by the Pew Research Center.

\_

Education is not a form of consumption that represents a costly expenditure for government but instead serves as an investment that improves the economic worth of individuals (e.g., human capital) and thereby raises a country’s overall productivity and economic competitiveness. In other words, governments support education because it ultimately strengthens their countries. Education like other forms of investment in human capital, can contribute to economic development and raise the incomes of the poor just as much as investment in physical capital, such as transport, communications, power, or irrigation. The World Bank, which provides financial and technical help for the development of poor countries, has long recognized the importance of investment in education and has been active in this field since 1962. The World Bank’s present strategy in investing in education can be summarized by the following principles:

1. Basic education should be provided for all children and adults as soon as the available resources and conditions permit. In the long term, a comprehensive system of formal and non-formal education should be developed at all levels.

2. To increase productivity and promote social equity, educational opportunities should be provided without distinction of sex, ethnic background, or social and economic status.

3. Education systems should try to achieve maximum internal efficiency in the management, allocation, and use of available resources so as to increase the quantity and improve the quality of education.

4. Education should be related to work and environment in order to improve, quantitatively and qualitatively, the knowledge and skills necessary for economic, social, and other development.

5. To satisfy these objectives, developing countries will need to build and maintain their institutional capacities to design, analyze, manage, and evaluate programs for education and training.

\_\_\_\_

Private sector investment in education:

There are at least four reasons why a compelling business case can be made for private sector investment in global education.

First, new action is urgently needed to improve education systems in emerging market economies and low-income countries. It is the children born today whom companies will be recruiting in future, and the vast majority of these new employees will have been educated in weak education systems in Asia, Africa or Latin America. Currently, the United Nations estimates that there is an annual $38 billion external financing gap for basic and lower secondary education in these regions between what governments can reasonably be expected to fund and what international aid donors are likely to support. Today this financing gap seems unlikely to be addressed, and indeed it may even get worse. Corporate giving to global health is 16 times what it is to global education. While governments and international aid donors must be pushed to do more, new actors are clearly needed to advance the status of education around the globe. Business has a vested interest in helping education systems develop the competencies of young people and, we argue in this report, it may be time for corporations to invest accordingly.

Second, access to a good-quality education is a strategic growth constraint for business that has a direct impact on the bottom line. The inability to secure future talent with the right skills and to manage talent-related costs keeps firms from being able to quickly scale up their operations to meet demand in new locations and to launch new products and services. In a global survey of over 1,000 CEOs, almost 30 percent said that talent constraints kept them from pursuing market opportunities, and that number jumped to over 50 percent among business leaders in countries that belong to the Association of Southeast Asian Nations. Labor costs are increasing, and in the same survey 43 percent of CEOs said talent-related expenses, including turnover, have a negative impact on their firm’s growth and profitability. Companies also bear significant costs to compensate for poor-quality education and the low skill levels of graduates, including investing in remedial training programs. In India alone, for example, in one five-year period information technology companies almost doubled the amount they spent on training employees, from $1 billion in 2007 to close to $2 billion in 2011.

Third, there is in fact a significant return on investment in education, as well as the potential to close a major value gap. Modest early-stage investments to ensure that each child attends school, remains in school and learns in school can yield significant economic returns. Indeed, using data from a “typical” Indian company, researchers have found that $1 invested in education today returns $53 in value to the employer at the start of a person’s working years. Furthermore, these investments have broad-reaching effects on the opportunity cost for “lost talent”—namely, young people who do not survive, due to preventable child mortality, let alone thrive and make it through the education system—and thus have a significant impact on a country’s overall economic performance. In India alone, nearly two-thirds of children born each year do not finish secondary school for a plethora of largely preventable reasons. In pure economic terms, this represents an opportunity cost of over $100 billion to national annual economic output, or about 5 percent of gross domestic product (GDP).

Fourth, innovative new vehicles for business investment in social sectors are emerging, demonstrating that the future economic value of tomorrow’s talent could be positioned as an attractive investment opportunity for today. Where a business case can be made to investors, it is perfectly possible to channel significant private sector resources to help solve public problems. Lessons from innovative financing models, whether from global health or prison recidivism, can provide a useful starting point for exploring how business could invest in public education systems in emerging market economies and the developing world. Ultimately, good-quality education for all young people is a good investment not only for governments and individuals but also for business. Forward-thinking corporations must now engage further upstream in the talent pipeline and begin to “backward integrate” to augment the talent pool. What is needed now is a concerted and collective effort to develop new models of private financing for the public education challenge around the globe; not to privatize education but to ensure that every child, irrespective of background, has access to a fully funded, good-quality education. National governments should think about how fiscal incentives could be used to help attract and reward private corporations that embrace a long-term investment mindset toward talent development.

This challenging situation calls for nothing short of global collective action. We urgently need efforts to quantify the future economic value of human potential and to tie it to financing models that leverage both economic and societal returns on the investment of capital. The future prosperity of our global economy depends on our ability to recognize our shared responsibility in providing quality education and act with new energy to invest in its provision in emerging market economies and the developing world.

\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_

Education and poverty:

Link between poverty and education:

This is the secret that everyone knows: the children of poor families are far less likely to do well in school than those whose parents are affluent. The ministers and pundits who want to deny or diminish the link are keen to present it as the invention of soft-focus lefties trying to justify a socialist theory of education or to excuse incompetent teachers. However, the clearest and most persuasive recent evidence for the link was produced not by a teacher’s union or a liberal academic – but by the Treasury, in its fourth report on the modernisation of Britain’s tax and benefit system. Reviewing nearly 30 years of research, the Treasury reported: “Children from disadvantaged backgrounds are much less likely to succeed in education… On ‘difficult to let’ estates, one in four children gain no GCSEs (the national average is one in twenty) and rates of truancy are four times the national average… There is considerable evidence that growing up in a family which has experienced financial difficulties, damages children’s educational performance…The physical, emotional and social damage which is inflicted on children who live in poverty, is clearly reflected in the academic results. The evidence goes on and on – from the US, from the OECD, from the EU. There are literally dozens of academic studies which confirm the link between poverty and academic failure.

\_

It is a well-documented fact that children from low-income households are significantly less likely to be successful than their middle and upper class counterparts. Studies have repeatedly shown that family income is one of the strongest predictors available for measuring success, both in the classroom and later in life. With fewer resources and less of a focus on education at home, children growing up in poverty are behind from the very beginning. Household stresses from living in poverty build up in the child, making it extremely difficult to concentrate on education. Even if they are going to school regularly, children in poverty often fail to get an adequate education due to the stress of destitution. Since they have such a difficult time in the classroom, the kids fall into the poverty trap, in which their lack of education prevents any rise on the social ladder. Until recently, it was unclear exactly what biological process made that the case. However, recent studies have pointed towards working memory as the key psychological factor linking poverty and education, specifically in academic achievement. Working memory is a “temporary storage mechanism” that lets us hold information and facts in our head for short-term usage and manipulation. The process of using working memory is central for reading, problem-solving and learning new languages. A number of studies have shown that children with the best working memories also tend to have the highest test scores and the best grades. Children in poverty consistently have a less developed working memory than those above the poverty line. With a dearth of educational resources in poor countries, an underdeveloped working memory often goes unnoticed and untreated. This means that in addition to dealing with stress at home, children in poverty also have trouble remembering basic facts and instructions at school. Unable to stay on task, and struggling to keep up, their failure at school only adds to their stress level. What’s more, a study published in the Development Science journal showed that, “Stress in early childhood negatively affects a child’s working memory in adulthood.” The problems for children in poverty become even bigger problems in their adult lives. While a poor working memory for a child only means bad grades, it spells unemployment and crushing poverty for an adult. The answer must come well before adulthood. With properly trained educators, an underdeveloped working memory can be easily spotted and rectified before it becomes a larger problem. The lack of a proper education makes up a major part of the poverty trap — a phenomenon in which people living in poverty cannot rise up due to scarce resources, depression, lack of opportunity and other issues. The poverty trap can start before the child ever enters the classroom, and it has long-term psychological consequences. Even from early childhood, poverty can create both a biological obstacle and an inescapable trap that collectively reduces the likelihood for academic and monetary success.

\_

Are children from poverty more likely to struggle with engagement in school?

The answer is yes.

1. Health and Nutrition:

Overall, poor people are less likely to exercise, get proper diagnoses, receive appropriate and prompt medical attention, or be prescribed appropriate medications or interventions. A study by two prominent neuroscientists suggested that intelligence is linked to health (Gray & Thompson, 2004). The poor have more untreated ear infections and hearing loss issues (Menyuk, 1980); greater exposure to lead (Sargent et al., 1995); and a higher incidence of asthma (Gottlieb, Beiser, & O’Connor, 1995) than middle-class children. Each of these health-related factors can affect attention, reasoning, learning, and memory. Nutrition plays a crucial role as well. Children who grow up in poor families are exposed to food with lower nutritional value. This can adversely affect them even in the womb (Antonow-Schlorke et al., 2011). Moreover, poor nutrition at breakfast affects gray matter mass in children’s brains (Taki et al., 2010). Skipping breakfast is highly prevalent among urban minority youth, and it negatively affects students’ academic achievement by adversely affecting cognition and raising absenteeism (Basch, 2011). When students experience poor nutrition and diminished health practices, it’s harder for them to listen, concentrate, and learn. Exposure to lead is correlated with poor working memory and weaker ability to link cause and effect. Kids with ear infections may have trouble with sound discrimination, making it tough to follow directions, do highly demanding auditory processing, and understand the teacher. This can hurt reading ability and other skills. Poor diets also affect behavior. Students can often appear listless (with low energy) or hyperactive (on a sugar “high”).

2. Cognition:

Children from lower socioeconomic backgrounds often perform below those from higher socioeconomic backgrounds on tests of intelligence and academic achievement (Bradley & Corwyn, 2002). Commonly, low-SES children show cognitive problems, including short attention spans, high levels of distractibility, difficulty monitoring the quality of their work, and difficulty generating new solutions to problems (Alloway, Gathercole, Kirkwood, & Elliott, 2009). These issues can make school harder for children from impoverished backgrounds. Many children who struggle cognitively either act out (exhibit problem behavior) or shut down (show learned helplessness). But cognitive capacity, as well as intelligence, is a teachable skill (Buschkuehl & Jaeggi, 2010). If you’re not teaching core cognitive skills, rethink your teaching methods. Students who struggle with reading, math, and following directions may have weak vocabulary, poor working memory, or poor processing skills. Studies show that high-performing teachers can overcome the problems of underperforming kids (Ferguson, 1998). Like effort, cognitive capacity is teachable.

3. Vocabulary:

Children who grow up in low socioeconomic conditions typically have a smaller vocabulary than middle-class children do, which raises the risk for academic failure (Walker, Greenwood, Hart, & Carta, 1994). Children from low-income families hear, on average, 13 million words by age 4. In middle-class families, children hear about 26 million words during that same time period. In upper-income families, they hear a staggering 46 million words by age 4—three times as many as their lower-income counterparts (Hart & Risley, 1995). In fact, toddlers from middle- and upper-income families actually used more words in talking to their parents than low-SES mothers used in talking to their own children (Bracey, 2006). This language difference is not subtle; it’s a mind-boggling, jaw-dropping cognitive chasm. A child’s vocabulary is part of the brain’s tool kit for learning, memory, and cognition. Words help children represent, manipulate, and reframe information. Kids from low-income families are less likely to know the words a teacher uses in class or the words that appear in reading material. When children aren’t familiar with words, they don’t want to read, often tune out, or feel like school is not for them. Also, many students don’t want to risk looking stupid (especially to their peers), so they won’t participate in class.

4. Effort:

Uninformed teachers may think that poor children slouch, slump, and show little effort because they are—or their parents are—lazy. Yet research suggests that parents from poor families work as much as parents of middle- or upper-class families do (Economic Policy Institute, 2002). There’s no “inherited laziness” passed down from parents. One reason many students seem unmotivated is because of lack of hope and optimism. Low socioeconomic status and the accompanying financial hardships are correlated with depressive symptoms (Butterworth, Olesen, & Leach, 2012). Moreover, the passive “I give up” posture may actually be learned helplessness, shown for decades in the research as a symptom of a stress disorder and depression. Research from 60 high-poverty schools tells us that the primary factor in student motivation and achievement isn’t the student’s home environment; it’s the school and the teacher (Irvin, Meece, Byun, Farmer, & Hutchins, 2011). Effort can be taught, and strong teachers do this every day. Students who show little or no effort are simply giving you feedback. When you liked your teacher, you worked harder. When the learning got you excited, curious, and intrigued, you put out more effort. We’ve all seen how students will often work much harder in one class than in another.

5. Hope and the Growth Mind-Set:

Hope is a powerful thing. Research suggests that lower socioeconomic status is often associated with viewing the future as containing more negative events than positive ones (Robb, Simon, & Wardle, 2009). Low or no expectancy (“helplessness”) is also related to low socioeconomic status (Odéen et al., 2012). In short, being poor is associated with lowered expectations about future outcomes. The student’s attitude about learning (his or her mind-set) is also a moderately robust predictive factor (Blackwell, Trzesniewski, & Dweck, 2007). Taken together, hope—or the lack of hope—and mind-set—whether you believe that you’re simply born smart or that you can grow in intelligence along the way—can be either significant assets or serious liabilities. If students think failure or low performance is likely, they’ll probably not bother to try. Similarly, if they think they aren’t smart enough and can’t succeed, they’ll probably not put out any effort.

6. Relationships:

When children’s early experiences are chaotic and one or both of the parents are absent, the developing brain often becomes insecure and stressed. Three-quarters of all children from poverty have a single-parent caregiver. In homes of those from poverty, children commonly get twice as many reprimands as positive comments, compared with a 3:1 ratio of positives to negatives in middle-class homes (Risley & Hart, 2006). If caregivers are stressed about health care, housing, and food, they’re more likely to be grumpy and less likely to offer positive comments to their kids. The probability of dropping out and school failure increases as a function of the timing and length of time that children are exposed to relational adversity (Spilt, Hughes, Wu, & Kwok, 2012). Having only a single caregiver in the home—if the father is absent, for example—can create both instability and uncertainty because the children are missing a role model. Two caregivers offer the luxury of a backup—when one parent is at work, busy, or overly stressed, the other can provide for the children so there’s always a stabilizing force present. Relationships can be challenging for children who lack role models and sufficient supports. Low-income parents are often less able than middle-class parents to adjust their parenting to the demands of their higher-needs children (Paulussen-Hoogeboom, Stams, Hermanns, & Peetsma, 2007). For example, many parents don’t know what to do with children who have attention deficit hyperactivity disorder (ADHD), who are oppositional, or who are dyslexic. Disruptive home relationships often create mistrust in students. Adults have often failed them at home, and children may assume that the adults in school will fail them, too. Classroom misbehaviors are likely because many children simply do not have the at-home stability or repertoire of necessary social-emotional responses for school. Students are more likely to be impulsive, use inappropriate language, and act disrespectful—until you teach them more appropriate social and emotional responses.

7. Distress:

Although small amounts of stress are healthy, acute and chronic stress—known as distress—is toxic. Children living in poverty experience greater chronic stress than do their more affluent counterparts. Low-income parents’ chronic stress affects their kids through chronic activation of their children’s immune systems, which taxes available resources and has long-reaching effects (Blair & Raver, 2012). Distress affects brain development, academic success, and social competence (Evans, Kim, Ting, Tesher, & Shannis, 2007). It also impairs behaviors; reduces attentional control (Liston, McEwen, & Casey, 2009); boosts impulsivity (Evans, 2003); and impairs working memory (Evans & Schamberg, 2009). Distressed children typically exhibit one of two behaviors: angry “in your face” assertiveness or disconnected “leave me alone” passivity. To the uninformed, the student may appear to be either out of control, showing an attitude, or lazy. But those behaviors are actually symptoms of stress disorders—and distress influences many behaviors that influence engagement. The more aggressive behaviors include talking back to the teacher, getting in the teacher’s face, using inappropriate body language, and making inappropriate facial expressions. The more passive behaviors include failing to respond to questions or requests, exhibiting passivity, slumping or slouching, and disconnecting from peers or academic work.

\_\_

The impact of poverty on educational outcomes for children: 2007 Canadian study:

Children from low-income families often start school already behind their peers who come from more affluent families, as shown in measures of school readiness. The incidence, depth, duration and timing of poverty all influence a child’s educational attainment, along with community characteristics and social networks.

\_\_\_\_\_

Faulty assumptions and unsustainable approaches in education vis-à-vis poor people:

Some approaches to education development are based on underlying assumptions that are unsound and mutually contradictory. Some of the very commonly stated important assumptions and approaches include the following:

1. Poor societies cannot afford good education. Formal education is costly. It requires huge resources that many international organizations and some developing countries cannot afford. Hence, the most appropriate forms of education suggested for poor developing countries are less expensive, non-formal education and adult education (e.g., Coombs and Ahmed, 1974). Accordingly, for a long period development planners concentrated their attention rather exclusively on adult literacy and non-formal education programs. These programs are offered as an alternative to formal education; and they are of short duration (six months to two years). This is partly based on a presumption that formal education is not relevant for the poor. Governments in developing countries also favored non-formal and adult education, primarily because it was ‘cheap’ relative to formal education, and they could still claim to be engaged in promoting education for eradication of poverty. Since formal education facilities are not sufficiently available, it became not the second-best option but rather the only available option to the poor (Haq and Haq, 1998). However, short-duration, non-formal and adult education cannot be a substitute for formal education, and it cannot provide a sustainable solution to the problem of poverty. Such policies may also increase inequalities between rich and poor.

2. At best, formal primary or basic education is enough to eradicate poverty. It is assumed that post-primary, more particularly higher education has neither a role to play in reducing poverty, nor can it be afforded by poor developing countries. Hence emphasis was laid on basic education, and secondary & higher education was ignored to a great extent in development plans of many developing countries. Global education programs, such as ‘Education For All’, also led to the strengthening of these tendencies. In fact, basic education and higher education are viewed as two alternatives, ignoring the inter-dependencies between the two layers of education on the one hand, and the role of higher education in development and in poverty reduction on the other. After all, analyses of the relationship between higher education and poverty also reported significant contribution of higher education to reduction of poverty (Tilak, 2002). Perhaps higher education may form a more sustainable means of reduction of poverty and also a more reliable measure of development than mere basic education.

3. It is no more necessary for the State to assume responsibility for educating its citizens. It is increasingly argued, particularly in the current global wave of privatization and marketization, that the responsibility of education can be left to the private sector and that the State can save its scarce resources and efforts for other activities. Though education has traditionally been a responsibility of governments in most modern civilized societies, governments in developing countries begin looking towards the private sector for promotion of education Accordingly, state policies are formulated in such a way that all levels of education, including basic education, get rapidly privatized in many developing countries, and simultaneously the State can gradually withdraw from the education sector, leaving it altogether to the private sector and the NGOs. The governments’ scarcity of resources and compulsions caused by ‘structural adjustment’ loans and programs borrowed from the international financial institutions has significantly contributed to this. One may, however, question, how the private sector, characterized by profit motives, will help in the development of education, as a means of reducing poverty and or as a measure of welfare and development in itself. After all, education is widely recognized as a public good and also as a merit good.

4. Along with the above, it is also assumed that there is willingness to pay for education on the part of the people, including the poor. Accordingly, serious attention is being given to policies relating to introduction of and increase in cost recovery rates in education, including basic education that generally is expected to be freely provided, as per the UN conventions and national constitutions. Perhaps it is possible to argue that it is not ‘willingness to pay’, but ‘compulsion to pay’ that the poor people feel, as the State does not spend enough on education. (Tilak, 2001, 2002). Families feel compelled to spend on textbooks, stationary, uniforms, private coaching etc., as the State neither spends adequately on primary schools, nor on libraries, laboratories etc. in colleges and universities; also, the State does not recruit an adequate number of good quality trained teachers

5. A trained qualified teacher is not important, even in basic education. This is one of the most dangerous assumptions increasingly circulating in developing countries. Partly supported by isolated micro level experiments by NGOs – national and international, or others – and mainly lured by the possibility of saving huge public resources on teachers’ salaries, while avoiding the problems of teacher management, governments began recruiting ‘barefoot’ teachers (e.g., Shiksha Karmis in India). These do not possess required qualifications and training to teach, and they teach on contractual basis for a very small pay. The adverse effects of such strategies on quality of education could be very severe.

6. Poor people do not value education. The most damaging assumption underlying several education strategies of developing countries is that people are ignorant; they do not value education, and therefore whatever is provided is appropriate. The high rate of non-participation in schooling is attributed more to the ignorance of the people than to the inadequacies in supply of education. It is increasingly argued that there exists no demand for education. But as recent surveys (e.g., PROBE, 1999 in India) have revealed, there does exist a huge demand for education; even poor, illiterate parents living in rural areas want education for their children, including for their girl children. But what is demanded is not just any education, but reasonable quality education.

7. Decentralization is the key for education for development. One of the most fashionable approaches to education development in recent years is ‘decentralization’ (together with liberalization and privatization) (Streeten, 2000). Decentralization per se is desirable; it is also particularly important in large-size developing countries, where central governments may not be able to effectively plan, provide, manage and supervise the education systems in all parts of the country. While few doubt the importance of decentralized approaches to education development, it is also important to note that some central governments find it convenient to use decentralization as a mechanism of abdication of its own responsibilities for educating the people. Secondly, a decentralized approach is also viewed in many places as a mechanism for raising resources from local communities that will substitute the budgetary resources of central government for education. Thirdly, reliance to a great extent of local resources, might contribute to regional inequalities. The dangers involved in decentralization are too serious to ignore.

\_\_\_\_\_

Education as a cure for poverty:

A satisfactory explanation of why some people are poor is essential if we are to be able to tackle the roots of poverty.

Among the key causes, or at least correlates, of poverty are

• Region-level characteristics, which include vulnerability to flooding or typhoons, remoteness, quality of governance, and property rights and their enforcement

• Community-level characteristics, which include the availability of infrastructure (roads, water, electricity) and services (health, education), proximity to markets, and social relationships

• Household and individual characteristics, among the most important of which are

– Demographic, such as household size, age structure, dependency ratio, gender of head

– Economic, such as employment status, hours worked, property owned

– Social, such as health and nutritional status, education, shelter.

Note that education is only one factor among plenty causes/correlates of poverty.

\_

Julie Strawn of the Center for Law and Social Policy, reviewing an extensive sample of basic education and training programs, concluded that education alone is much less successful in raising employment and earnings prospects than education combined with a strategy of focused job training (with an eye on local demand), “soft skills,” and holding out for quality jobs. One study found that a year of schooling raised the earnings of welfare recipients by 7 percent, the conventional labor economics finding. But given that many of these workers entered the job market in the $6- to $8-an-hour range back in the 1990s, you’re talking about moving families closer to the poverty line, not pushing them significantly above it. Strawn reports that when education is combined with multidimensional job training, readiness, and a quality job search, the returns more than double. One Portland, Oregon, program resulted in a 25 percent increase in earnings, a 21 percent increase in employment, and a 22 percent reduction of time spent on welfare (all compared with a control group that didn’t get the services). This finding makes intuitive sense: Programs that combine general education with training specific to both the individual and his or her local labor market work better than ones that fail to combine these activities. (They’re also more expensive, but you get what you pay for.) Education is only a partial cure for poverty because of all the other recent changes in the labor market. At least half of the inequality increase has taken place within groups of comparably educated people, and since 2000 that proportion has been increasing. Income-inequality data show that the concentration of income in 2005 is the highest it has been since 1929. Yet research shows that since the late 1990s, the college wage premium has been flat. In real terms, college wages were up less than 2 percent from 2000 to 2006. Even among the highly educated, only some are getting ahead, and lots aren’t. In short, we are not living in a meritocracy, where we can reliably count on people being fairly rewarded for their improved skills. So we need additional mechanisms in place to nudge the invisible hand toward outcomes that are more meritocratic and just.

\_

Education is a supply-side policy; it improves the quality of workers, not the quality or the quantity of jobs. A danger of overreliance on education in the poverty debate is that skilled workers end up all dressed up with nowhere nice to go. Some economists contend that faster rates of technological advance require ever more highly skilled workers, and that demand shifts lead to low wages for the low skilled. But the work at Economic Policy Institute suggests that while technological changes have always been an important factor in the labor market, the rate of change now is no greater than in the recent past. Technological change is one of the reasons Americans have doubled the share of college grads but continued to see their unemployment rates in the 2 percent range — they produce and absorb a lot of college grads. Their economy, however, is still very much structured to produce lots of low-wage jobs. In fact, according to the occupational projections by the Bureau of Labor Statistics, the low-wage sector of economy will be the source of much job growth over the next decade. The American economy will continue to employ significant numbers of retail salespersons, waiters and waitresses, food-prep workers, home health aides, maids and housekeepers, etc. Of the 30 occupations adding the most jobs to their economy, those requiring the least training make up half of the total. The question, thus, is not whether jobs for those with only high-school degrees or even some college will exist or be plentiful in our future (they almost certainly will be); the question is whether the quality of these jobs will help reduce or reinforce working poverty. Economists Sheldon Danziger and Peter Gottschalk for analysed the roles played by multiple determinants of poverty. Their method parses out the roles of race, family structure, economic growth, and inequality, and adds the role of education. Family poverty rates did not fall much between 1969 and 2000, because major factors were offsetting one another. Improved education lowered family poverty by almost 4 percentage points, a considerable effect. But economic growth and inequality had considerably larger effects. Growth in the overall economy lowered poverty rates by 5.7 points, while inequality raised it by 5.1 points. Family structure added 3 points to family poverty rates over these years, and race added 1 point. Decompositions of this type are far from definitive; they tend to hold one factor constant and see how things change, then do the same for another factor, etc. But in this case, the results are demonstrative of the main point regarding education in the poverty debate: It’s an important part of the story, but it’s not the whole story, or even the most important part.

\_

Why you should cover poverty and education in your community (American perspective):

1. Poverty is both a cause and effect of insufficient access to quality education. A lack of education perpetuates poverty and breaking this cycle is key to overcoming persistent poverty.

2. Education is directly related to the ability to earn enough to stay out of poverty.

3. The quality of people in your work force is a fundamental factor behind economic growth. Low education levels discourage new investments in a county and poverty persists.

4. Young children from low-income families score significantly lower on literacy and math assessments before starting kindergarten. The gap persists as students progress through school.

5. Teachers and officials in school systems struggle to see past the poverty of low-income students. This creates disadvantages for poor students.

6. Families living in poverty tend to be less involved with their children’s school activities.

7. The higher the individual’s education, the more job benefits that become available. Almost 95 percent of people with college degrees have employer-provided health care compared with 77 percent for high school-level employees and 67 percent for high school dropouts.

8. Thirty percent of children do not graduate from high school. These children are more likely to go to prison or enrol in welfare programs. They cause a financial burden on society in lost tax revenue, increased health care costs, food stamps, subsidized housing and public assistance.

9. In 2004, nearly 600,000 18-year-olds failed to graduate high school. Had these students advanced one grade further, then about $2.3 billion would have been saved in taxpayer-funded medical care over one lifetime.

10. If the high school graduation rate increased by 1 percent for men ages 20 to 60, then the United States would save as much as $1.4 billion each year in reduced costs from crime.

11. Affluent students in high-poverty schools score lower on reading tests than poor students in mostly middle-class schools. Test scores for all students— regardless of the level of family poverty—drop in a school where half or more of the students are eligible for subsidized lunch. When more than three quarters of the students live in low-income households, scores drop significantly.

12. In a study by the Education Trust, data confirm that the best predictor of a school’s achievement scores is the race and wealth of its student body. The Trust also found that in majority white Illinois schools poor teachers are rare. Only 11 percent of teachers scored in the lower quartile. Schools populated mostly by minority students contained 88 percent of teachers who earned poor marks for teaching quality.

13. Students from low-income households are more likely to quit school. Multiple studies show that socioeconomic status is a significant predictor of potential dropouts. Studies have found that students in low-income homes were three times more likely to drop out than those from average-income homes and nine times more likely than students from high-income homes.

14. Poverty in any community can lead to: Family involvement in schools problems, Learning problems, Graduation problems, Work force problems, Teaching problems, Attendance problems, School problems, Resource problems, Testing problems, Adequate Yearly Progress (AYP) problems.

Education as human resource development:

Human resources…constitute the ultimate basis for wealth of nations. Capital and natural resources are passive factors of production; human beings are the active agents who accumulate capital, exploit natural resources, build social, economic and political organizations, and carry forward national development. Most educational planners, serious commentators and economists would argue that major educational reforms within developing nations are now urgently needed; and that the determination and pace of a nation’s social and economic development are contingent on its human resources and not its capital or its materials resources. According to Frederick H. Harbinson, “A country which is unable to develop the skills and knowledge of its people and to utilize them effectively in the national economy will be unable to develop anything else.” In that regard, the formal education system has therefore been viewed as the principal institutional mechanism for developing knowledge, skills, values, attitudes and aspirations, and that will enable individuals to function effectively as agents of change in societies. It is the belief that the greater the emphasis and increase of these outcomes the more rapid the development. This reality has led many countries especially developing countries to commit to the rapid quantitative expansion of educational opportunities thereby increasing the enrolments at all levels of the school system.

\_\_\_

Education and development:

The evidence on why education should be afforded greater priority globally and nationally is clear and abundant. Education is the bedrock for sustainable development. Education is a human right and is essential to ensuring that children and youth become active citizens. It is a key ingredient for the implementation of any new comprehensive human development agenda and for reducing extreme poverty. Education is believed to be the bedrock of any country’s development. It is considered as the cornerstone for meaningful and sustainable growth development and achievement in art, science and technology. Arguing in the same direction, Umo (2005), had affirmed that, worldwide, education has been recognized as a catalyst for achieving socio-economic, scientific and technological development. For instance, Federal Government of Nigeria (2004) declared in its National Policy on Education that education is an instrument par excellence for achieving national development. In other words, any meaningful growth and development of any country must be preceded by a sound educational planning. Since education constituted an indispensable aspect of social realities of a nation, it is of cardinal importance to any society. The relationship between education and development cannot be debated without linking the structure of educational systems to the economic and social character of societies. That link between education and development is a two-way process. Educational systems, for the most part, reflect the socio-economic structures of the societies in which they function; whether egalitarian or in-egalitarian. There is also the tendency for educational systems to perpetuate, reinforce and even reproduce those economic and social structures. Paradoxically, educational reforms can significantly induce corresponding social and economic reforms in the societies. It is clear that there remained a large scale and apparently growing problem of illiteracy. It is also clear that economic and social development depended on bringing about changes in many people’s thinking. The development process is in fact an educational process, or rather it should unfailingly be viewed as such. We cannot therefore conceive of development in the absence of education any more than education in the absence of development. The importance of education for the development of a country must not be underestimated because education is the tool which alone can inculcate national and cultural values and liberate people of false prejudice, ignorance and representations. Education provides them required knowledge, technique, skill and information and enables them to know their rights and duties towards their family, their society and towards their motherland at large. Education expands their vision and outlook, provokes the spirit of healthy competition and a desire to advance for the achievements of their consciousness regenerating truth, and thereby capability to fight ignorance, injustice, corruption, violence, disparity and communalism, the greatest hazards to the progress of the nation. Education is thus a means to stir up the consciousness of the people against injustice, violence and disparity, generally resulting in unrest and violence.

\_\_\_\_\_\_\_

Education and democracy:

\_\_\_\_\_\_

\_\_\_\_\_\_\_

\_\_\_\_\_\_\_