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"Human history becomes more and more a race between education and catastrophe."

- H.G. Wells

Introduction

Who We Are

In an age where "anomie" is applied to a generation that has yet to assume the reigns of life, it becomes increasingly difficult to break away from the crowd and maintain the courage and confidence needed to face issues influencing the future. Yet here we are at our fourteenth UNIS/UN Conference once again focusing on a major problem. What are we trying to do? We are trying to raise awareness, which may hopefully lead to action. Such action, we can hope, will spur us to care for the earth and its life, for the burden will be passed onto our shoulders. We will be confronted with the choice: stay the course (which means inevitable destruction) or evolve and restructure. It is important to take a stand now, because at the rate at which society and the environment are crumbling, by the time it is our turn, nothing may be left.

Education is like a peach: the furry skin provides warmth and security, the fleshy fruit gives nourishment and in the center you've got one hell of a hard seed. The future depends on that seed, but it is almost impossible to break through the shell of this seed and alter the pattern of growth. Education can be seen as a rotted peach which has been left to decay underneath a tree on ground that isn't nurturing it. Why was it thought that this peach would be eternally ripe? Why can't this piece of fruit, representing education, take care of itself? We may think of trees filled to capacity with apples, oranges, pears and bananas, each unable to drop and join with soil that could produce new life. These fruits are like the problems affecting the world.

We are a lucky minority who have benefited from institutions equipped with above-average resources to provide for our learning needs. We have the right and the obligation to air our ideas and observations concerning the education we receive and the world we are soon to inherit.

Foreword

We had one true inspiration when we chose this topic and wrote this Working Paper: fear.

Education was not an easy subject to work around. Because education differs so vastly according to geography, it was difficult to write a paper which was globally unbiased. We could find no common thread which students around the world shared, save fear.

Today's youth have been labelled as "ignorant, self-centered, and apathetic." Yet those who categorize so freely take no actions to right the failures of our educational systems.

When discussing the problems of education in preparation for the conference, we realized that children, (prior to, and in the first years of schooling) are full of enthusiasm, creative ideas, and a thirst for knowledge. Yet when they are old enough to be funnelled into the bottleneck of the educational systems, they are stifled and stunted. In this bottleneck they become angry, not always knowing why, and many of them rebel, in one sense or another.

At last, these children grow into adults and leave the stifled world of the bottleneck. Now they are once again free to expand, or are they? Their creativity has been eroded by the constraints of the educational system.

Most have developed tunnel-vision and see only what is in front of them; they are consumed by the pursuit of personal gratification and "success." The anger which they once felt so strongly has dissipated; for

the transitional period has already taken place, and they no longer have any past recollection of what they once were.

We know for certain that the anger starts in the bottleneck, because we, who are the ones within, are angry. It is an anger which is derived from the feeling of being misled. We are talked at constantly, and told that we are the "hope for the future," and that it is up to us to make the world a better place; yet we are then embraced by those in power, and are molded according to their standards and beliefs. Instead of changing the future, we perpetuate the state of affairs. Despite our many years of education, we were never given an opportunity to voice our opinions; nobody asked us for any personal input, our schedules were formulated for us right down to our lunch break; and when we were presented with a question, the answer was soon provided. Teaching was rhetorical; teachers were unwilling to accept answers different from their own and merit was earned on the basis of attitude.

Instead of changing the future, we perpetuate the state of affairs.

We are now the ones who fear. We are afraid of what the future holds for us. What will the world be like when we are adults, when we finally escape from this bottleneck? We do not want to have to look to that other "ignorant, self-centered, apathetic" guy next to us, and ask, "Well?"

It was for this reason that we entitled the 1990 UNIS/UN Student Conference "Education For Survival."

The Global Crisis

The existence of earth's life is endangered, as well as plagued with suffering and injustice. It is therefore only natural that we place as our

first priority the question of our survival, both as a part of all life and as people with wisdom and humanity. The success of our efforts to solve problems depends on our educating ourselves, as many crises are the result of ignorance. Those who have little or no comprehension of the dangers that global warming, radiation, the depletion of the earth's natural resources, an ever-growing population, pollution, or drugs pose to the human race as a whole cannot help halt the damage that is being done.

We are also growing up amidst war and poverty, the homeless, with drugs, disease, and famine. The fear that there is not enough wealth to share among the world's people, or enough time to enjoy it, impels many of us to greed and materialistic values. The mechanization of much work and even leisure has alienated us from feeling pleasure in creativity and companionship. Our energy goes into surviving the daily hassle, not into finding the will to change it. For some it is a time of despair. Yet it is also a time of opportunity for those who dare to hope that we may succeed over these problems and survive.

Environmental Degradation

The state of the environment today is grim enough to warn the world that if we do not take immediate measures to remedy its deteriorating condition, our planet will not be able to support its growing population much longer.

Pollution of the environment is a man-made process which destroys the earth's ecosystem. Nature cannot restore many of the earth's delicate balances alone; we must take the responsibility to clean up the environment before much more of the damage becomes irreversible. The main causes leading to environmental devastation are new pressures on the world's economy and ecosystem, such

as increasing industrialization, growing population, poverty, and the development aimed at alleviating this poverty.

Development through industrialization is considered the key to solving the problem of poverty in the Third World. Although industrialization is accepted as the foundation for modernization and higher standards of living, it destroys natural resources and is the greatest cause of pollution in the world.

New "convenience" products made from toxic chemicals are rapidly replacing less harmful ones. Plastics and radioactive materials take years to decompose when discarded and are particularly dangerous to the environment. These toxic wastes contaminate the atmosphere, food chain, and water supplies.

The ozone layer of the atmosphere, the earth's shield against the harmful rays of the sun, has a growing "hole" in it over Antarctica. This layer is able to absorb ultraviolet light and filter the UV-C and UV-B rays which cause eye damage and skin cancer. As the amount of ozone in the atmosphere is diminished, more of the dangerous rays penetrate the shield and damage the proteins and DNA of all life on earth. Ozone depletion is partially caused by the introduction of new chemicals, called chlorofluorocarbons or CFCs, into the atmosphere which disrupt its composition. CFCs can be found in aerosol sprays, refrigerator gases, solvents, the chemicals used in the production of microchips, conductors, and styrofoam.

The voracious appetite of humanity for energy to run cars, factories, and power plants affects our climate. A shift in the climate can cause the melting of polar ice caps, expansion of seas, and changes in the flora and fauna of deserts and fertile land. Scientists have predicted a rise between 1.1 and 4.4 degrees Celsius in the earth's average temperature by the year 2050. This warming process is known as the "greenhouse effect." Like the

glass in a greenhouse, the atmosphere of the earth serves as a protective layer to retain heat. Now, an increase in carbon dioxide, as well as in other greenhouse gases emitted into the atmosphere, has resulted in more heat rays being reflected back to the earth.

Sulfur dioxide emissions from factories form sulfuric acid in the atmosphere, combine with moisture and fall to the earth as acid rain. Acid rain harms lakes and forests, kills fish, eats away at the marble and limestone in buildings, and contaminates our drinking water. As the wind carries these emissions from continent to continent, acid rain becomes a global problem.

Clean water is essential to all life, yet we still pollute it shamelessly. Allowing sewage disposal, toxic spills, and pesticide runoffs to contaminate water jeopardizes the water supply which we need to survive. Ocean pollution is threatening the extinction of many species of marine life. Chemical refuse is also washing up onto our beaches and in some locations poisoning those who dare to swim.

Farming is both essential to feeding a growing number of mouths and a source of livelihood for millions of people. This pressure is compounded by unequal land distribution caused by economic inequities. As poor farmers turn to marginal land that wealthy farmers do not want, its cultivation aids in its erosion. As population and need for crops increase, land productivity decreases. Overcultivation and the cutting down of forests to clear room for farming and to harvest commercial products and fuel-wood lead to deforestation and desertification. Each year irreversible desertification claims 6-million hectares of land worldwide, placing global food supplies in danger. The consequences of desertification and deforestation include worse droughts, floods, famine, and increasing numbers of refugees who put more pressure on the lands to which they flee.

Drugs and Disease

We need only to flip through history books to find that disease and drugs have besieged humans for centuries. The Black Death, or bubonic plague, swept through both Asia and Europe in the Middle Ages killing countless millions in its wake. People are calling AIDS the plague of our age. Like the Black Death, AIDS moves across continents, knows no boundaries nor distinctions of any kind, and claims anyone as its victim. And like the plague, AIDS as yet has no cure. However, we can protect ourselves with a defense which in many ways is more powerful than any drug; that defense is our mind. We can use our minds to educate ourselves about the disease, how it is contracted, and what it does to the body. We don't know how long it will take to find a cure, so for now knowledge of AIDS is our only source of protection - literally our minds make the difference between life or death.

The mind is also our best defense against drugs. Drugs have always been used for curing pain and sickness, for creating trance or hallucinations in religious ceremonies. However, a new epidemic is sweeping across the globe. Cocaine, one of today's most deadly drugs, comes from the coca plant that grows in South America. The demand for it is so great that cocaine money is a significant factor in economic survival for Bolivia. In Colombia, coca leaves, and not coffee beans, are the largest export. It is a long journey from the jungles of South America to the back alleys of America's underworld, but a high demand makes it profitable for many to supply it to the United States. As yet it has been impossible to stop the flow of cocaine, although millions of dollars have been spent. The cost of drugs to society is very high.

As long as there is a demand, there will be a supply. Therefore, the best way of destroying this billion-dollar death industry is by stopping the demand. Education about drugs

in our school systems is necessary. Drugs today are affecting kids, as young as 10 years old and even younger. Elementary education should include information on the drugs they may face and the consequences of taking them. Children must also learn how to deal with peer pressure, which is an especially difficult problem in the vulnerable years of junior high and high school when kids just want to be accepted. These students can only be independent if they have confidence and self-respect, which usually requires support from adults and peers. However, they must understand for themselves that taking drugs is destructive and make their decision about drugs, based not on what others will think of them, but on what they want for themselves.

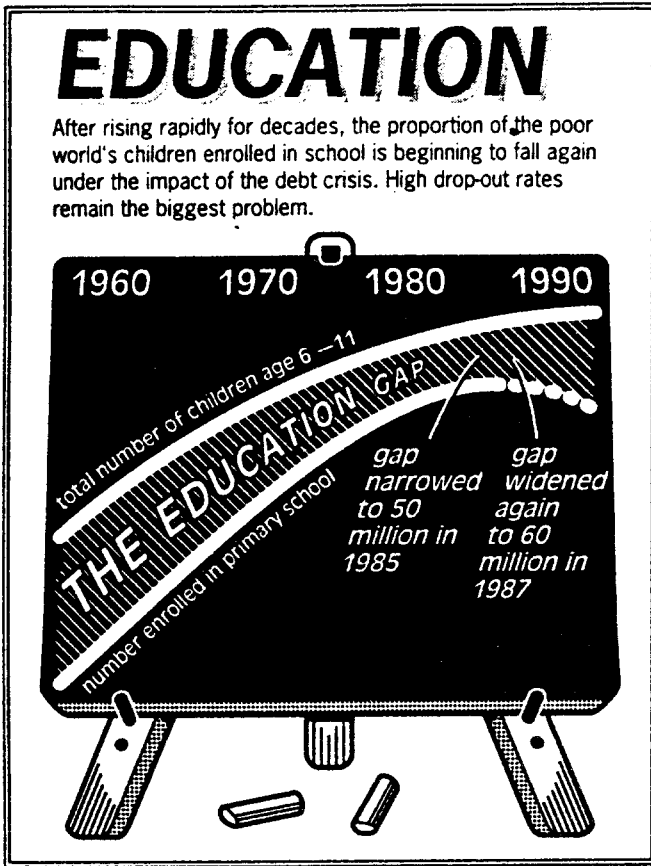
Poverty

Do you think of the itinerant homeless people lounging on the side of a luxurious New York City hotel when you hear the word poverty, or the sad eyes and skeletal figure of a child starving in a developing country? Or are these images too painful to think about very often?

The majority of the world's population is poor, and millions are slowly dying of malnutrition in many countries. The poor lack not only food but adequate housing, clothing, health care, and employment. In cities around the world many turn to drug abuse, alcoholism, violence, and crime.

Poverty is increasing even in the most developed countries. In the United States, some men are deserting their families, hopeless of finding decent employment to support them. The number of households headed by females has increased substantially in the last 15 years. Women do not earn as much as men and are forced to live on welfare. A whole generation of children has been born into poverty. In some places, the poor and elderly are driven to eating pet food

because it is less expensive than regular food. Surpassing that extreme are those who must search through garbage cans in hopes of finding anything somewhat edible.



Source: UNICEF

In developing countries, poverty is made worse by the interest governments must pay on debts they incurred borrowing money to develop their economies to overcome poverty.

World Bank studies show that the economic returns from education are higher than most other kinds of investment: four years of primary education, for example, is associated with an average increase of 10 percent or more in farm productivity.

Education will yield very high economic returns in both developed and developing countries. Although education does not provide the whole solution to today's poverty, it can provide the poor with hope and tools to create changes leading to a better life.

Population

The world experienced a dramatic rise in population after the second World War as better health care in developing countries caused a decline in the death rate. However, in the last decade, we have seen a change in this demographic trend. The growth rate of world population has declined since the 1970s. Of course, this decline does not imply that population growth is not still strong. In fact, although many demographers project an eventual growth rate of zero in the second half of the twenty-first century, this may well come too late; that is, after world resources have been exhausted.

The current slowing in population growth is evident in the contrast between the 2 percent world population growth rate in 1965 as compared to the projected 0.9 percent growth rate in 2020. The rate of population growth in the world today is rising fastest in Africa. The total African population in 1988 was 609,718,000 and the projected population for the year 2000 is 872,234,000.¹

The growth in world population can be attributed mainly to developing countries. In these countries, population increase is highest in urban centers. Statistics indicate that the two groups increasing at the highest rate are the elderly and the young. Global life expectancy has risen from 52 years in 1955 to the projected age of 73 in 2025. In addition, in developed countries, the "baby boom" generation of 30 to 40 years ago are now having children themselves.² This age distribution is most difficult for the economies of developing nations because neither the young nor the elderly are productive members of the labor force, yet they still have to be supported by national economies.

As population increases, the supply of labor increases. Such an increase means greater human resources, but to ensure that people become assets, rather than burdens on their

societies, resources for health and education are needed, as well as jobs.

Developing nations are struggling to develop their own independent economies. However, population increases use up any growth of the gross national product (GNP) almost as soon as it is produced. Preventing population growth, however, can create problems. Policies of "population control" can dehumanize people and put their most intimate lives under dictatorial rule. The best way to persuade parents to have smaller families is to educate women on how to plan fewer pregnancies and how to aid the health and education of their children.

Inequality

The injustices imposed on populations by inequalities in the world today stand as a threat to our survival.

Inequalities in physical strength, intellectual ability, character, and personality will always exist. However, many inequalities are caused by structures and systems that allow them to arise and continue. At present, wealthy, industrialized countries can spend six thousand dollars a year on a child's education, while some developing countries can only spend two dollars! One-hundred-million children throughout the world do not go to school. There is no question of equality of opportunity for them.

This kind of injustice deprives society as a whole of the benefits of the human resources which the poor and victims of discrimination could offer in better circumstances. It also taxes society through a work force that has no motivation to give its best because it will gain few rewards. Maintaining inequalities is also a drain on resources. For instance, a massive police force is needed to "enforce order" when victims of inequality turn to one or another form of violence.

People become angry at whomever they perceive as responsible for their unequal status in society. They revolt against those who have power over them, or seek a "scapegoat" that may be a minority within their own community or an enemy across the border. Quite often this anger leads to physical aggression, perhaps war. And war increases the suffering.

According to the Universal Declaration of Human Rights proclaimed by the United Nations in 1948, "All humans are born equal in dignity and rights." Human rights are defined as "those conditions of life which allow us fully to develop and use our human qualities of intelligence and conscience and to satisfy our spiritual needs." Today we probably have the technology to produce enough for everyone, but we lack the will needed to distribute it equitably.

Can the human species survive burdened by gross inequalities? Even if we could survive physically, what about our values of freedom and dignity? Can a few people enjoy life, if there are many who do not?

Greed

Over the years many experts on child rearing have argued about the merits of parents rewarding their children with material gifts for work well done. Could this be the point where greed first works its way into impressionable young minds? Whether it is or not has not yet been determined. But in many societies there has been an increased emphasis on material rewards. Happiness and success are measured in status and standard of living. Status is assured by the possession of material wealth. The material goods which are presently being consumed in such horrific quantities are more often than not very far from being necessities for life.

The greed which calls for all of these consumer goods increases their production. The factories work faster and harder to increase their output. Unbeknownst to the greedy consumer these factories are eating up more of the world's natural resources while polluting the atmosphere and the oceans. The consumer may be aware of this occurrence, but is more interested in becoming the proud new owner of a carousel microwave.

You're probably thinking that all of this rhetoric must be aimed at Yuppies, but it isn't. Greed is not confined to the rich; it is a trend that affects all of us. We concentrate too often on what we cannot have and do not need, and ignore the diminishing beauties the world has to offer. This selfishness not only limits our vision of the world's plight, but also blinds us to the pain and suffering of our less fortunate brothers and sisters. How can one be satisfied immersed in a "career" of perpetual want? We should care about the survival of our planet, but only when we transcend the social values of today will we be able to make any headway for this cause.

War

Nuclear war - it means the total destruction of life on this planet. Human society has lived with this possibility since the invention of the atom bomb more than 40 years ago. The Cold War led to the huge and expensive arms race of the two superpowers and the stockpiling of enough atomic weapons to destroy the world several times over.

The new decade of the 1990s is witnessing the possibility of an end to the Cold War. If the superpowers reduce their production of nuclear and conventional weapons, more and more resources can be diverted to areas of development, areas which can actually support human life rather than destroy it.



"FIRST THE MONEY, THEN THE WORLD"

Although the likelihood for worldwide nuclear war seems to be diminishing, "localized" wars continue. The existence of ethnic, religious and economic differences has created confrontations within many countries around the world today.

Violence, whether national or international, is a threat to survival in more ways than the obvious. War affects the education and development of an individual. If war comes close to a community, people are less concerned with education because they are busy saving their lives. In some instances, teenagers are used in armies and the general war effort. Young people who are forced to fight and kill are often traumatized by the experience and find it difficult to return to normal life. Many victims of war become refugees. Of the many refugee camps existing today, few have adequate educational facilities.

If one adds together all types of conflicts that have taken a "significant" number of lives, the number of "conventional" wars since 1945 surpasses 150. Some, using gas and new,

more precisely targeting weapons, have been almost as horrible as a nuclear war.

These wars, as well as the anticipation of future conflicts, have diverted a large percentage of many countries' revenues to their defense budgets. Many poor countries, that desperately need more skilled people to develop their economies, weigh the need for education against the need for security - and security usually wins. In the last 30 years developing countries have on average increased their defense spending more than seven times. Together they spend about 200-billion dollars each year, money that could go to paying off their debts and investing in the development of their resources.³

The de-escalation of the Cold War may imply less fighting in some countries; others are not directly affected by superpower conflict. Unless their security is better assured by renewed efforts to resolve existing conflicts, resources, both human and physical, that could be redirected to help us all survive, will be wasted.

*Education for change means ...
learning to think in new ways.*

Education as a Means of Change

The majority of the human race has emerged from a stage of darkness where it felt itself subject at any moment to the whims of elusive spirits. Humanity, in an effort to explain what was incomprehensible, conjured up spirits and demons as causes of good and bad circumstances. But as people began to explore the world and perceive nature systematically, they developed generalizing theories and no longer referred to the caprices of spirits for explanations of events. Through knowledge, people for the first time, felt that

they had the power to change the present and create a future.

The variety of education people receive determines their perception and reaction to the world. People can be educated to perpetuate values and ways of living, or to view them critically and be prepared to change them. Change to be "fashionable" or "modern" is often frivolous and without intrinsic value. There is much that societies and cultures have developed over time that is important for both their physical and spiritual survival. However, when old ways do not have answers to new problems, then change means imagination and courage to try new ideas.

Education for change means learning how to use our minds critically to recognize problems and estimate the success of various solutions. It means learning to think in new ways because the standard solutions are not working. It means restructuring knowledge, finding new perspectives on reality and - why not - having fun doing it.

The Value of Education

We pay much respect to education, but students are often primarily aware of the tyranny of having to learn, of a "congestion of the brain," as Matthew Arnold, a famous nineteenth century educator, called one result of learning. We sometimes forget that education is both for use and delight.⁴

We need knowledge in order to be competent to do the jobs that have to be done well. But acquiring this knowledge should not lead to narrow specialization and competition for good jobs. We also need to learn how our particular skills fit into a wider whole and how to share our knowledge to help others achieve competence.

Knowledge is for understanding "the treasure house of human experience" (Ibid.). Literature, history, and the humanities can give us both a cultural identity and compassion for the human condition. It is difficult to teach tolerance, but it is possible to understand the insecurity that is the basis for intolerance. It is important to be open to differences, to have the courage and integrity to change one's point of view, even if that means losing old friends. Old enemies can become new friends and perhaps if everyone had that kind of courage there would be no enemies.

Knowledge leads to the wisdom to see oneself as part of a larger whole ...

Knowledge brings the enjoyment of discovery and wonder for the beauty around us. Knowledge can give us power, not for domination but to help others, to explore, to solve problems, to share experiences, to offer criticism, to be committed to values, to give and receive love, to understand failure as well as success, and finally, to accept death as part of the wonder of life.

Knowledge leads to the wisdom to see oneself as part of a larger whole, with respect and responsibility both for the self and for the whole.

Human Development

A primary purpose of education is to ensure humanity's survival by developing understanding of the environment and learning how to adapt or change it when necessary. The child first learns by observing his family. Parents teach their children values, ethics, and basic information needed to ensure their child's survival. A child desires to communicate with others and begins to speak and, later to write, to let his

needs, ideas, and aspirations be known. Eventually, a child is asked to take on certain responsibilities which involve acquiring more knowledge and experience.

Human development includes self-knowledge and the ability to accept and reject certain ideas. Human development is based on the belief that every individual has dignity and worth, and has something to offer the world he or she lives in. Therefore, one may say human development can become a vehicle for change. The more we know about ourselves, each other, and our environment, the more capable we become of making appropriate changes. Whether you become a political leader, a doctor, a parent, or engage in any other line of work, you will change the world based on your beliefs and experiences.

A human being is as much a resource as any fossil fuel or metal ore. A human being whose physical, intellectual, and moral resources have been developed can add his or her strength to the job of human survival.

Individual development leads to global change. Global changes required to sustain life are more likely to occur when people are self-reliant and responsible. The primary goal of education must be to develop individuals who think independently and understand that their survival depends upon the survival of all humanity.

The Crisis in Education

We are dealing with two kinds of crises. One concerns the problem of survival of the human species, and the other is in the field of education itself. The problems of education are universal but differ in emphasis from country to country. In some instances, young people are not given enough opportunity to learn; in others, opportunities seem to be wasted, both by the students and the educational system itself. The more we read about education, the more we begin to think that no one fully understands what it is. Governments, foundations, and UN agencies bring out reports saying that there is not enough education; we have the wrong education; make a nutritional soup of education; add a little computer here, some science projects there; lengthen the school year; develop something called "global studies," and don't forget literacy.

Schools, with some exceptions, fail to educate young people adequately for their future. There is much discussion about what the best methods for learning are and many exciting projects are underway, but their success seems to be limited.

Let us assume that one of the purposes of education is to prepare young people for the job market. A crisis in some of the industrialized countries of the world centers around an insufficient number of high school graduates to fill higher level jobs. The students have either not completed their courses, or are so badly trained that they can neither use what they have learned nor understand the kind of behavior and commitment that employment requires.

In the United States, student populations drop because students don't see the point of staying in school when they could be out making money in the "real world." Unfortunately, unskilled labor floods the employment pool to such an extent that appropriate jobs are all

filled and employment services can't handle the volume of unemployed.

Why does Japan have fewer problems educating its young people? Is it because he students are ensured a job upon graduation, or that education is of relatively greater importance in their society than in the West? Perhaps it is because their teachers are respected and teaching is a more highly valued profession.

Developing countries experience different problems. Some have too many skilled graduates for the jobs available. Their economies are not yet able to absorb the highly qualified professionals who have had the opportunity, ability, and motivation to get training. Some as a result had to migrate to developed countries for better job prospects. And yet, these same countries have many poor people who need to learn the skills required to help themselves.

Where do the solutions to these many problems lie? There are as many ideas about what to teach and how to learn as there are people proposing them. They center around making the content of what we learn more relevant, the method of learning more interesting, and training teachers to be more creative in both content and method.

There is much good work done in education all over the world, but coordinating it effectively is another matter. An administrator on the New York City Board of Education complained that the problem "... is that the whole is less than the sum of its parts. There are wonderful parts. There are programs that would give you chills, they're wonderful. But they get lost in the shuffle."⁵

What We Should Know

During the last century, industrialization and technological advancements enabled

humankind to gain much control over its environment. However, so much information has been gained that one is now often unable to retain it all or understand its significance.

To be able to handle the demands of our world, we now have to be educated on much more than just the "traditional subjects." However, it is very difficult to decide what should be learned, when, and how.

The acquisition of information often takes place through formal education. Present education is undoubtedly attempting to teach too much. In the field of science, new discoveries are added to the curriculum. This causes problems for students because they are now forced to learn these new facts on top of an already saturated curriculum.

Topics and concepts that need to be taught now more than ever include the environment, scientific studies and discoveries, economics, and politics.

The problem with the environment is growing, and in fairness to future generations, we cannot continue to degrade the environment and exhaust our resources. We need to know how to use our present knowledge to explore technologies that heal the environment and pass this information on to future generations so that they may continue to protect our planet.

Certain "alternative technologies" have been discovered that minimize the damage humans do the earth. For example, garbage disposal has been literally a mounting problem, as heaps of refuse litter the earth, float in the oceans and even in space. Recycling, an alternative technology for garbage disposal, can't eliminate all waste but can significantly reduce it. Aluminum recycling is currently the most successful. If all paper were recycled, we could eliminate over 50 percent of our solid waste as well as drastically reduce the number of trees cut down each year. Simply

recycling the copies of one edition of the Sunday New York Times would save 75,000 trees. The recycling methods are known; we must now learn to use them effectively.

Leaps made in the scientific field of biogenetics have been tremendous and sometimes eerie. It began with the discovery that the genes of a creature could be mapped and eventually copied. So far, scientists have found the genome to mice, making it possible to create a mouse in a laboratory instead of through natural reproduction. Scientists are now studying the human genetic code, which could lead to the ability to "construct" human beings from thin air.

Economics is the study of the allocation of limited resources to satisfy unlimited human wants. It deals with the flow of money between producers and consumers, the fluctuation of prices, demand and supply of products, as well as costs of the resources used by producers. Although we may not understand such complex terms as "supply and demand," "leakages and injections," "oligopoly," "monopoly," and "law of eventually diminishing marginal utility," economics is a basic part of life in any society.

On a larger scale, economics deals with income, investment and costs of whole systems: how countries produce and distribute "wealth," what they need to import and what they need to export to pay for these imports. This involves international competition and international relations, which are linked to politics.

Most modern political/economic systems fall into either of two main categories: capitalism or socialism. However, there is really no purely capitalist or purely socialist system. Most integrate some aspects of both. Capitalism, because it values the incentive of private profit, has been more productive, as many socialist countries are discovering. Socialism is more concerned with equality,

and protecting all from suffering the consequences of poverty. Even countries that do not consider themselves socialist have some sort of social security. One needs to understand the drawbacks and benefits of various political systems.

One basic aspect of politics is democracy, the active participation of members of society in their system of government. This is a system founded on: freedom of expression, assembly, the right of all citizens to vote, civil rights - all the protections of individuals guaranteed by the United States constitution and similar documents. In a democracy, the majority gets its way, but the minority is heard and gets a chance to become the majority in a later vote. The British Parliament uses the term "Her Majesty's loyal opposition." To be in opposition is not a crime, but an important function. Groups in power should welcome diversity of views and work with the opposition instead of seeking to destroy it. As power fluctuates between parties from election to election, it is essential to maintain small parties as well as large ones to ensure representation of all people.

Democracy, unlike other more tangible concepts, may be dull when taught only through history and the study of constitutions. It has to be taught, and learned, through practice. One needs to have experienced debate, negotiation, majority rule, protection of minority rights over and over again to understand how democracy works and to have confidence that it will work.

Students cannot gain the experience of democracy in an "authoritarian" classroom where the teacher only lectures, nor in a school without a proper student government, which would provide the student body with a voice that can be heard. The beginning of learning about democracy is critical thinking and open discussion. The next stage is "student empowerment," achieved through activities in which students have

responsibility to make decisions and experience (and thereby learn from) the consequences.

The Arts in Education

One usually thinks of education as learning math, science, or history etc.; the arts seem to be brushed aside and given less priority in a child's learning. Yet they are vital to developing a child into an individual. Through theater, dance, music, poetry and art, people learn the beauty of the world and gain an inner strength and sensitivity through their creation.

Our perception of reality cannot always be expressed in words.

People are not machines; we have an emotional side to our intellect. What we know and understand is not just limited to empirical perception, it is also intuitive. The arts allow us to communicate emotion and can link people together in a way that other media cannot. The arts are forms of expressing beliefs and ideas, both of praise and pain. Our perception of reality cannot always be expressed in words. The development of our aesthetic nature enriches us and makes us more fully human.

"Mens sana in corpore sano"

Without healthy bodies we cannot have healthy minds. People who are sick and weak cannot learn, let alone survive. However, health as part of education is more than running around the track and swimming the length of the pool. It begins by understanding how our bodies work and how not to abuse them. Nutrition, cleanliness, and regular exercise are the foundations of good health. We must also understand the devastating consequences of wrong choices involving

drugs, alcohol, smoking, and indiscriminate sex.

Governments and the adults responsible for children have the obligation to give us a healthy start and protect us from malnutrition, disease, child labor and abuse. These conditions stunt the bodies of millions of children who cannot withstand the onslaughts of hunger and illness; their brains never fully develop. If they survive to have children they will perpetuate the physical weakness that prevents people from learning and working.

Children and young people need to learn how to stay healthy. We go on junk food binges and pull "all nighters" to do our homework. We often feel that we are immune to the consequences of experimentation despite our knowledge of things such as drugs and AIDS. Few of us, however, know about having a body in tip-top shape, or have experienced the exhilaration of back-packing up a mountain and seeing the view from the top.

Some systems make a point of stressing physical education in their curriculum. In others, students cut Gym because they are either bored or have too much homework. Compulsory calisthenics in the school yard early in the morning may not be the best way to convince teenagers to exercise, nor are competitive games that can cause physical and sometimes even mental pain to some participants. Exercise that develops a sense of enjoyment and pride in one's body can become a lifetime habit, and games that stress cooperation rather than competition are healthy for society as well as the individual students who learn them.

Critical Thinking

There is a fine line between the education that is informative and useful and the education that is indoctrinating and dogmatic. This boundary is marked by the different methods

used by the educators. Preaching instead of teaching - not allowing for discussion - conditions individuals to accept everything said and enforced by powerholders. Promoting critical thinking allows for growth of the mind and results in free-thinking human beings. Instead of having facts thrown at for later regurgitation, critical thinking advocates the processing of information by the student.

Critical thinkers are not easily won over to propaganda and advertisements.

Critical thinking should start early in the life of an individual. It is advanced in students when they are provided with ideas that they have to develop further. Given options and two sides of an argument, students can be trained to work through conflicting positions. This is important considering that in the social sciences and the humanities, and even sometimes in scientific studies, absolute truths do not exist. Humanities and the social sciences deal with interpretations, and those studying science must keep in mind that facts may exist that disprove accepted models. Because of this, people should be educated so that they instinctively question ideas and facts rather than docilely accept them.

Critical thinkers are not easily won over to propaganda and advertisements. They have been trained to consider alternatives before settling on one idea. But are there limits to critical thinking? Corporations with business interests to further, and governments with the perpetuation of control as a goal might feel that their power is threatened by educated masses.

Critical thinking is not subversive. It helps individuals become more self-sufficient. Critical thinkers can understand technology and make good use of resources. If they challenge establishments, one can be sure that they do so after carefully thinking through alternatives and therefore have good reasons

for their actions. These alternatives may be better than official policies, and therefore freedom and encouragement of critical thinking can be beneficial to society as a whole.

Conflict Resolution

What is conflict? According to Webster's Dictionary, conflict is a "mental struggle resulting from incompatible or opposing needs, drives, wishes, or external or internal demands." It is the basis of difficult emotions such as anxiety, aggravation, anger, and frustration which can develop into violence, war, and destruction.

On a personal level, conflict affects relations within families and communities. Worldwide, it creates tensions and poses problems for peaceful coexistence.

Coping with conflict is something that we all find hard to do; it is a learned skill, acquired through experience. Learning how to cope with conflict at an early age is essential for the development of an individual, yet it is a very difficult concept to adopt. Consider how often you are honestly willing to be open to an opposing view. Imagine an entire country faced with doing what you find hard to do. For this reason it is necessary to teach how to deal with conflict rationally, without avoiding it or blowing it out of proportion.

Learning to cope with conflict begins in the home. Courses and activities with this goal in mind have been designed and are presently being applied at the elementary and secondary school level. Attention to this kind of learning within the school plays a big part in the development of conflict-management skills.

Through the study of the humanities and social sciences one learns the causes of conflict on the national and international

level. Insecurity and injustice, interpreted differently by the opposing sides of a conflict, lead to a struggle to protect perceived interests. Peace treaties that have not recognized these fears and have not found a fair compromise have inevitably led to future wars.

A just peace and a lasting resolution to a conflict is based on an understanding of "the other," and a respect for his or her needs and fears. We can learn this understanding through our studies, discussions, and activities.

Literacy

Literacy is a fundamental human right and need that enables people to develop their abilities and gain greater control of their lives. In the modern world illiterate people have to a large extent lost their place in society. Although the rate of illiteracy is gradually decreasing, the absolute numbers of illiterate adults in our growing global population is increasing. There are millions of illiterate people in the world today. These people have limited opportunities for employment and slow the development of their countries.

In order to eliminate illiteracy, we must know whom it affects, and how and why it affects them. We know more women than men are illiterate. Today an estimated one-fifth of the men in the world cannot read or write, but almost one-third of the women are illiterate. Illiteracy and poverty go hand in hand, so it is not surprising to find that illiteracy is more widespread in developing nations than in industrialized countries. However, functional illiteracy is a serious problem among many minority groups in developed countries.

Furthermore, the standards of the job market are rising. Each job will soon require a higher level of education, and subsequently a higher level of literacy. The people who had

previously qualified as borderline literates may now join the functionally illiterate as they are no longer employable.

Fifty years ago it would have been more than enough to know how to read, write, and do some basic arithmetic. But now, at the rapid rate at which technology is advancing, being numerically literate is an absolute necessity. Numerical literacy is the ability to add, subtract, multiply, divide, read a graph, and know how to interpret the meanings of numbers and symbols in different mathematical equations.

People who consider themselves well educated may be mathematically illiterate because of the lack of importance they give mathematics. In fact mathematical illiteracy is often dismissed with phrases such as, "Well, I'm just not a math person."

International Literacy Year

In December 1987 the United Nations General Assembly proclaimed 1990 as the International Literacy Year as part of their worldwide drive against illiteracy. UNESCO has set several objectives for this International literacy year: to increase government involvement of member nations affected by illiteracy; to increase public awareness of the of the problems of illiteracy; and to eliminate it by the year 2000.

Achieving literacy requires national commitment. Developing countries often cannot pay for necessary school supplies like books, pencils, and paper, let alone teachers' salaries and school buildings. Poverty is the primary cause of illiteracy; we need to make both problems of the past.

Cultural Literacy

Part of what makes two people different is their background and their beliefs, that is, their culture. Culture is preserved through oral and written literature, the arts, philosophy, religion and customs. Knowledge

of a culture is called cultural literacy.

Often the way a culture looks at and tries to understand a situation is reflected in that culture's language. Second only to language, religion is the aspect of culture that is most important in giving identity to a particular group. It affects literature and the performing arts and can be a wonderfully creative force. However, it can also be destructive if used to denigrate other cultures with different religions.

Education in cultural literacy is important because it can give people a sense of identity. However, if it only teaches self-respect, it has not gone far enough; it must also teach the values of other cultures and an acceptance and respect for differences. Teaching this is not easy because most people either feel that, when all is said and done, their culture is superior, or feel insecure in their culture and so become aggressive in claiming its advantages.

The United Nations General Assembly has recognized the importance of cultural literacy and proclaimed 1988-1997 as the World Decade for Cultural Development. They have set two goals: to stress the importance of cultural literacy in the development process and to make cultural life in general more active and accessible to more people.

"Partners" Project

"Partners" is a global organization that has initiated an "Earth Education Project." Presently, they are working on an "Earth Curriculum" that would supplement high school curricula all over the globe and help adolescents become better "citizens of the world." They formed a Global Teachers Team to develop the Earth Curriculum, and while deciding what should be included in it, they approached us for help. They asked us to find out what the UNIS community felt was most

important to becoming a "citizen of the world" and we accepted the opportunity to approach our peers with this question. We wrote a questionnaire that we thought might help us define what one needs to know to become a "citizen of the world." Questions included rating the importance of certain academic subjects as well as inquiries about education as a whole. The results of the poll were recorded and collated by computer.

The results of the questionnaires were difficult to tabulate because there were many considerations, such as nationality and age, to take into account. With over 75 nationalities represented and ages ranging from 14 to 18, the poll was appropriate for gathering information with an international perspective. The easiest way to reach coherent conclusions was to search for the questions that had the greatest percentage of "very important to know," the ones with the greatest of "no importance to know," the ones with the greatest percentage of "excellent personal knowledge," and those with "poorest personal knowledge." Of the entire listings, the results were as follows:

The most important subjects were the environment, basic mathematics, and foreign languages, in that order. Basic mathematics, interestingly enough, was also the best known subject, with foreign languages and students' individual nations' histories ranking second and third. However, the environment ranked tenth as best known subject, in comparison to its position as the most important area to know. The four areas which were found the least important were communications, chemistry, anthropology, and arts/ music, in that order. The least well known topics were anthropology, philosophy, and computers. These answers may have been influenced by the fact that the students did not know what some of these subjects were.

The question "Do all students need to know the same thing?" brought out in a great many

answers the issue of relevance and specialization. Many of the people polled were concerned about relevance; for example, the teaching of agricultural techniques to a future nuclear physicist or teaching calculus to a shoe cobbler. At first glance, the answer may seem to be no, all students do not need to know the same thing. Does this mean that only relevance should determine what should be taught? If so, who would determine what is or what is not relevant to an individual, and how would this be determined? A great deal of concern was expressed about elitism and inequalities and other implications of these ideas.

One issue revolved around gender-specific education. Despite current trends toward equality between the sexes, an almost equal number of males and females believed some areas of knowledge were more important to either men or women. A significant number of males and females held that subjects such as war and some types of business courses should only be taught to males; whereas such topics as birth control, pregnancy, child care, and home economics should be offered only to females.

There was general consensus regarding the definition of the term "citizen of the world." Nearly everyone polled defined it as someone with an understanding of cultures others than one's own, with tolerance for difference, and with the realization that human society is and must be interdependent.

How Do We Learn?

One of the most commonly asked questions today concerning education is how we can arouse children's interests and spark their desire to learn. How can we motivate them to use their talents to their fullest potential?

Lack of motivation is not only detrimental to the children themselves but is also a waste of priceless resources for all.

For once a student has crossed that threshold into boredom and is no longer motivated to learn, he or she cannot be forced to absorb new materials. Surely all of you have at one time or another experienced boredom in a classroom to the extent that nothing can be retained. Through boredom your attention seems to wander. Your concentration fails you. And yet many of us have experienced the excitement of learning. What makes the difference between resenting sitting in a classroom, and enthusiasm for books and test tubes, and even teachers?

Learning Environments

In addition to the school curriculum that teaches us subjects such as science, history, and math, there is also the "invisible curriculum" which develops other skills as well as our morals, principles, and values. This "syllabus" gives us a necessary base for practical living.

One influence, outside of formal education, is our peers. If one considers that most of a student's day is spent with friends, it is not surprising that much is learned from them. Attitudes and beliefs, ranging from the social to the academic, are passed along among groups of adolescents. One is also affected by the desire for a good image. "Peer pressure" influences the development of an individual. The struggle to fit in and be accepted by others affects one's thinking and personality. Close associations allow one to supplement areas of weakness with another's strengths. Eventually, abilities may blend as friends learn from each other. Morals and ethics are usually developed through relations with others.

For some teenagers the influence of peers is

more important than the family. However, our education begins long before we even enter any learning institution. It begins in the home, during our preschool years which are the most important to the characters we develop. Family life can play a critical role in a student's success.

If children are brought up in a family that stresses the importance of a good education, they are more likely to take their education seriously. If parents teach their children the "dos" and "don'ts" of manners and attitudes, if they teach them how to deal with life's ups and downs, then perhaps they will be able to cope better with the pressures both of schooling and of life in general. If, on the other hand, the family pays no attention to children's development and does not provide them with any guidance, the children are more likely to go astray and never fully realize their potential. They may shift their attention to drugs, alcohol, and other destructive behavior.



Schools cannot succeed when children have to deal with personal problems, such as family conflicts. Parents may be unemployed, divorced, unwed, alcoholics, drug addicts, or victims of AIDS. The children themselves may be sick, hungry, beaten, and deeply unhappy. If society looks to the schools to solve its problems, it must first assure each child the love and protection of a family. That is a large challenge, but without healthy families, there cannot be successful students.

Values Education

Today's society is morally deteriorating because values such as compassion, generosity, and cooperation are cast aside by greed and selfishness. People seem to be more concerned with personal gain rather than the social responsibility of helping fellow members of society to survive. Can this decline in morality be attributed to the lack of teaching of values by families, schools and religious institutions?

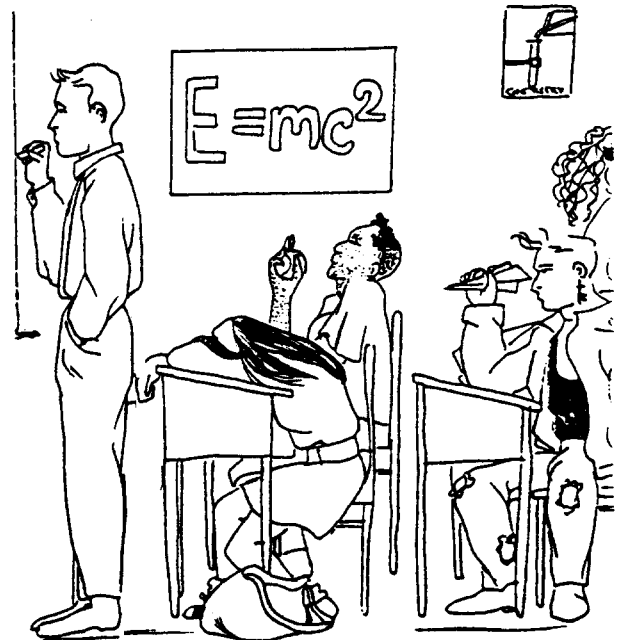
Parents are the most important people in molding a child's values. A child observes the acts of his or her parents and tries to mimic them. If parents stress the importance of helping others, their child will understand and develop the value of generosity.

It is difficult to make values relevant to young people when they are constantly bombarded by images and behavior that encourage materialism and self-gratification. They are quick to recognize the hypocrisy of adults who preach one thing but do another.

"Values education" is one way of bringing the teaching of values into schools. It centers around discussions of ethical problems where people are confronted with different choices. However, these courses can become "preachy" and as soon as that happens, students cease to take them seriously.

Another way of teaching values is through "hands on" community service. Actually seeing suffering, and how one's presence makes a difference, has a lasting influence.

Values such as empathy, sensitivity, and compassion can be learned through volunteering to work in a hospital, homeless shelter or tutoring program. Community service also develops students' self esteem, and gives them the confidence that they have something to contribute to society.



Alternative Education

The clock is ticking. Time passes slowly. Your teacher is talking down at you, and in your seat you are confined to the silent process of note taking. You are preparing for weekly testing and daily assignments. This is conventional education; but is it changing?

In recent years, the traditional belief that the only way to obtain a quality education was to be lectured at in a stagnant room composed of four thick walls has been questioned. Many students and teachers are helping to revolutionize education. More independent

study groups, extra-curricular activities, experiments, research projects, discussion-based courses and "open school" structures are replacing the traditional forms of education. Some seating arrangements have been switched from rows to semicircles, and often the emphasis is on group interaction. Teachers are pushing their students to apply their own insights and dig deeper into causes and effects rather than simply memorize and regurgitate facts.

"Freedom" and "flexibility" are perhaps the two words that best denote the concept of alternative education. This education is based on the theory that children will develop greater ingenuity in discovering how the world works if they do some investigating on their own instead of being confined to what is written on blackboards and in textbooks. Rather than following rigid curricula, students are allowed to participate in choosing subjects and may learn at their own pace. Adapting schooling to student needs is the goal.

Although we have begun to explore the possibility of change, the road to perfection is a long, rocky one. A large majority of teachers do not listen to students. Many dictate and turn a deaf ear to their pupils' suggestions. Students are expected to memorize an enormous amount of factual information which they will be asked to reproduce later upon demand.

Case Studies

City as School

The "City as School" program is a successful example of alternative education. In 1973 in New York City, a system of schooling was developed by 15 students and four faculty. It was designed to move teenagers that could not cope, or were bored with the four-wall-education method, out of the classroom and into an environment in which they could learn. The idea was to use the resources of

the city to stimulate the talents and interests of capable but unmotivated teenagers.

The program is offered to juniors and seniors who have already fulfilled their basic course requirements; once they have successfully completed the program they receive a high-school diploma.

The curriculum consists of internship programs at organizations such as Planned Parenthood, Amnesty International, museums, and cooperating businesses and institutions, as well as courses at city colleges.

The school now has 1500 students in New York, and has expanded to include schools in other states, London, and Berlin.

Neel Bagh

The Neel Bagh school, in a village in southern India, was founded in 1972 by David Horsburgh. Its uniqueness comes from the ideas on which it is built. Children are free not to attend school, so they very rarely "cut." There are no grades in the school and consequently no promotions. The children learn at their own speed. No punishments are given for bad behavior or poor marks. Children are encouraged from the beginning to be responsible for their own learning. No dogmas, opinions, religion, or political ideology are presented to them. The children are expected to make decisions for themselves.

The motivation for the children of Neel Bagh stems from the loving relationships between teachers and children, as well as from the use of interesting and enjoyable materials geared to the goals and abilities of each individual child. Every child is a teacher and helper to other children in the school, which enables them to play a more active role in their own learning.

The school is bilingual; some lessons are taught in Telegu and some in English. The

two-language system enables them to read extensively in English as well as teaching them how to appreciate first-hand the great cultural heritage of their own country.

Various conventional subjects are taught, as well as horticulture, farming, health care, carpentry, and building. These are considered important subjects because they are of immediate relevance both to the individual students and their communities. In fact, it was the students who built the school.

An important feature of Neel Bagh is the interaction between the neighboring village and school. As there are no strict schedules, children can fulfill their responsibilities at home as the seasons demand. They can bring community problems to the school and work together on finding solutions.

A teacher training program is also part of the school. Here, teachers and older students are taught how to operate a school similar to Neel Bagh.

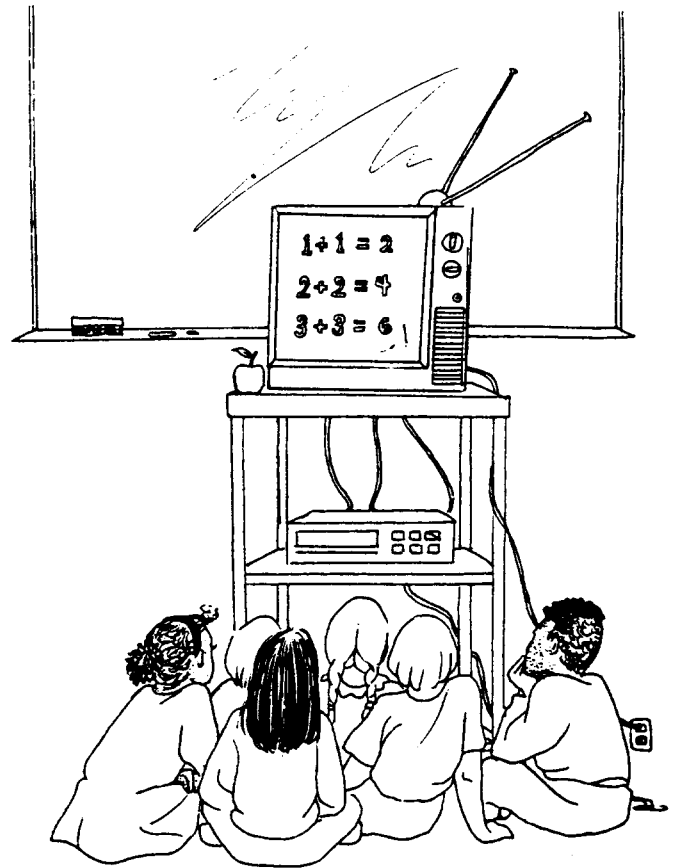
The United Nations International School began helping to support Neel Bagh in 1975. The money sent has been used to pay for toys, books, and other educational materials which are distributed free of charge to other primary schools in the district.

Technology for Learning

Technology in computers and television has advanced rapidly. Both systems possess such power and accessibility that they are ideal for use as tools to improve and develop skills. With careful planning we can devise totally new methods of education.

Television

With disciplined usage, television can be an excellent tool for learning since it helps children to supplement visual skills acquired by reading and writing. Television may be



"I'M YOUR NEW TEACHER, MR. TV AND TODAY WE WILL START WITH MATH..."

better in communicating certain messages than the printed word, especially to the illiterate and those who are lost in the traditional school setting. Television poses challenges which can be met without the required structure or self-discipline of reading. Some specialists feel that television can teach children to take in and comprehend preliminary information about action, process, and physical transformation.

"Television literacy is acquired through experience with the medium as is print literacy,"⁶ and can start at a young age by watching shows such as "Sesame Street™." Many facts are learned through television. Several studies have proven that children with good visual literacy skills get more out of films they see in school than those whose skills are less defined. As an important part of young children's education, television's power

cannot be ignored. Understanding concepts like death, poverty, friendship, responsibility assist children in their early interaction with the outside world and therefore television learning must be a guided responsibly on the child's behalf.

Much of our information or disinformation comes from television programs: weather, news, special programs, sitcoms and commercials. Commercials are the most sophisticated form of visual "persuasion." There is currently much controversy in the United States over the Whittle Communications news programs that are beamed into schools free of charge but include commercials to cover their costs of production. Young people as consumers can be easily swayed to buy these commercial products through this form of advertising. However, we can be less easily manipulated if we have some understanding of the techniques the producers use to capture our interest. Thus, television can be both an enlightening and a manipulative medium.

Computers

Computers at every level have become a crucial part of education. They enable us to store and process data, to save time involved in doing repetitive calculations, and to develop concepts that would previously have been limited by the capacity of our memories.

A revolution has occurred inside our homes; computers have replaced typewriters. A new generation, born into this environment, is at ease using them. An average seventh grader with constant access already knows how to handle a simple computer program. Society has adopted and adapted computers for its own needs in industrialized countries and increasingly in developing ones. They are learning tools which are very effective both in teaching basic skills and motivating students to go further in their education.

An example of this is LOGO, one of the most widely used educational computer languages developed by Wallace Feurzing and Seymour Papert in 1967. Geared towards junior high schools for learning mathematics and geometry, it integrates the uses of angles, units of length, and mathematical formulae to create graphics. LOGO emphasizes the logical structure of programming and can be used as an introduction to "higher level" computer languages such as Pascal or FORTRAN. The visual presentation of LOGO and the ease with which it can be used were found to be very appealing for young children. It has been adopted enthusiastically into educational systems as an adjustable tool and a link between computers and accelerated education.

The uses of computers for education are growing daily in science and technology. Early computers were used to deliver "teacher talk," especially in subjects such as math and grammar. Today, computers can provide graphic representations of abstract ideas such as three dimensional representations - a task which, until recently, was impossible.

Computers can make the knowledge explosion more manageable for students because facts can be retrieved at the push of a button; a computer is not impatient and will demonstrate any task innumerable times. As always, learning significant facts and their interrelationship is the goal. Students can ask questions, and are encouraged to probe further into aspects of a subject that interests them. Computers thus act not only as an encyclopedia, but as a guide to the development of critical thinking. Computers can link students all over the world through modems and bulletin boards. Questions and answers can be shared, information exchanged. Much of the optimism about the future of education is centered on the potential of this technology.

Science Education

The problems in science education are broad and far-reaching, but they seem to have resulted in a trend that has drawn students away from science and science-related fields.

When one hears the word scientist, the image that comes to mind is often an eccentric white male in a distant laboratory, isolated from the rest of society, working on vague abstract theories that have no apparent relevance to society. This mad scientist stereotype may deter students from pursuing scientific study because they are unable to see themselves in such a role. The white male image also suggests that women and minorities are not significant in the field. Possibly, this could be changed with the help of the media. As an AT&T Labs executive suggested, television and movies could create a more positive image by depicting scientists as educated people doing exciting work.⁷

Interest in science-related areas must be sparked by creating more "hands-on" experiments and lab work. Students need to be presented with aims and procedures that they can devise, arriving at their own conclusions, rather than having a conclusion served up to them from the direction sheet.

How much of what we are expected to learn is relevant and really necessary to understanding what we need to know? Maybe the abundance of information and too many technical details are boring students and obscuring essential subject matter. This reasoning may explain why the United States is currently concerned about having enough scientists. The information in a one year physical science course in the United States is spread over a five year period in the Soviet Union. American students are forced to absorb such a large amount of information that they are happy just to pass a course at the end of the year and, after fulfilling their

requirements, few continue in scientific studies.

Students' interest in science would be aroused if educators could make it clear that science has practical applications in the real world. A new approach to teaching science stresses its social value rather than its methodology. Some students may take naturally to the process of testing hypotheses through careful observation. Others find it intimidating. However, if students examine a problem that is relevant to their lives, and see how science can explain it and suggest solutions, they can better understand the reason for the methodology, and become more willing to struggle to master it.

My education was disrupted by my schooling.

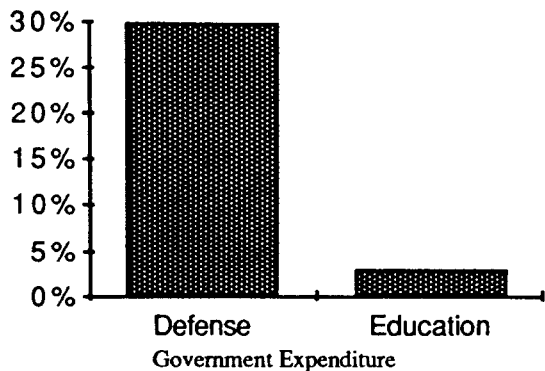
- George Bernard Shaw

Obstacles to Learning

Inadequate Resources

In most countries primary and secondary education is funded by the central government. Many times, however, governments are unable to allocate adequate resources to education and their programs suffer. Developing nations are those most affected by limited resources and low priority for government spending on education.

In 1986, one such nation spent 10 times as much on defense, (30 percent of the central government's expenditure) as it did on education (3 percent of the budget.) Its 1986 literacy rate was only 40 percent for adult males and 19 percent for adult females. Only 34 percent of students entering first grade finished primary school.⁸ Many children coming from economically disadvantaged



families had to leave school to help support them.

Other countries, such as Bangladesh, give education a high priority. And although the percentage of government expenditure for education (9.9 percent) is nearly as much as that spent on defense (11.2 percent), when this amount is divided by the number of children in Bangladesh, the per capita expenditure on education is totally inadequate.

Countries that allocate more resources to education instead of defense will, of course, have a more literate population. In 1976, when Algeria increased its government spending on education, the adult literacy rate went up from 39 to 63 percent for males, and from 11 to 37 percent for females by 1985. The percent of students completing primary school increased from 83 percent in 1986 to 90 percent in 1987.⁹

Lack of money allocated to education in developing countries leads to the inability to acquire minimum facilities such as books, school buildings, chairs, tables, not to mention modern facilities such as computers and science equipment. The result is that the educated population, no matter how large, will be less educated than populations in the developed nations. That is not to say that developed nations are immune to the problem. With lack of government funding, they too will suffer from lack of research, lack of teacher training, and salaries too low attract

gifted and imaginative teachers into the profession.

Elitism and Specialization

The elite in any society are the privileged. Their advantages come in the form of wealth and power. Entry into the elite class can be by birth, "connections," or through education. The education of the elite is superior and available at only a few schools and universities, which are expensive or have restrictive admission rules. If the education is highly specialized, the scholar is a rare and valued commodity. One cannot ignore a society's need for an intellectual elite with special skills. However, a system of education must also recognize the needs for employment, personal development, and fulfillment of all of the classes in its society. Elitism and the subsequent specialization it nurtures creates inequality in school and at work.

However, many governments cannot afford to or choose not to allocate sufficient money to public education to make it truly excellent and available to all. Private schools often have more money and so can afford to offer the benefits of better teachers and a smaller student-teacher ratio. The children whose parents can afford to give them the privilege of better education are given a better start. In the United States, an Ivy League college education (without scholarship or grant assistance) costs much more than attendance at a state university. Often a better job goes to the Ivy league graduate.

Many countries that had once been colonies, whose people rarely had the same opportunities as those of the "mother" country, were determined to establish a more equitable educational system once they had gained their independence. Extended case studies have been made on the subject of elitism in the nations of Gambia, Ghana, Mauritius, Nigeria,

and Sierra Leone in recent years.¹⁰ University fees have risen with inflation, and access to the best secondary schools appears to be completely monopolized by the elite, with the exception of Nigeria which used its earnings from oil to provide free education at all levels.

There is often a snobbery among the educated elite. As a privileged group, they begin to think that they deserve their raised status and look down on others who are less educated. They fail to realize - or forget - that their advantages come with obligations to help others. Often they perpetuate these advantages among their families and friends rather than raising the level of the less fortunate who have been prevented from giving their best to their society because they never had the chance to develop it.

Often with educational specialization comes a narrow vision that substitutes an area of expertise for an understanding of the whole picture. Specialists over-awe all criticism by their esoteric knowledge and by lacking the modesty to realize that they are only part of a larger whole.

A society needs to tap the resources and abilities of all of its people, not only those who can attend better schools. The elite and specialists should realize their responsibility to use their privileges for the betterment of society.

The Limits of Education

There are many reasons for learning, but one practical purpose of education is to prepare youth for their future position in society. The specific purpose of schooling varies in each society, as education must correspond to the social substructure, cultural traditions, economic needs, and national aspirations of the state. It can therefore be argued that the purpose of schooling should be measured in

terms of a "good" maximized for society even though it may not be maximized for each individual within the society.

Generally, it is believed that the more schooling one receives the greater are one's chances in life. Each country has a standardized educational level that is considered basic for an adequate life. If everybody in a society gets more schooling, does that mean that everybody will produce more and earn more?

If all are educated to their fullest capacities, the number of people qualified to hold certain jobs will increase while the number of jobs may remain the same. Eventually people would be forced to accept jobs for which they are overqualified because of a pressing need for income.

How should one plan education? A limited though perhaps realistic answer is on the basis of employment. The International Labour Organization (ILO) estimated that more than a billion new jobs would have to be created by the year 2000 in order to achieve full employment throughout the world. The problem of unemployment, or under-employment, is most severe in the Third World.

Clearly, there exists a need for a system of education which can meet these problems. Matching the education received by the individual to the jobs available is the solution. However, denying people an education because they will be overqualified for "work" contradicts all our ideals about education. Perhaps societies should restructure the job markets and examine what work should be paid. Without imagination and the will to develop and use human resources, education can initially lead to frustration instead of solutions.

Deschooling Society

Instead of education being the solution to the problem, could education itself be the problem? Ivan Illich seems to think so.¹¹ Education is structured around schools, and schools have become powerful institutions for indoctrinating the young to function in the present society. Present society is structured around a power elite of politics, business, and professions that must constantly be replenished by people who believe they too need what it offers in goods and services. Through a series of rituals like exams and certificates, we pass through the system, convinced that "the good life" centers around jobs that will get us more and more material goods and more services. If we succumb to this message we become junkies, manipulated to dependence on what society offers, too immersed in the rat race to dare to change it.

Schools have convinced us that they alone can offer education. Education sees itself as a business, offering a product to its clients and consumers. The success of this costly operation of buildings, administrators, teachers, textbooks, hardware, and software is measured by the number of its graduates who move on to good jobs.

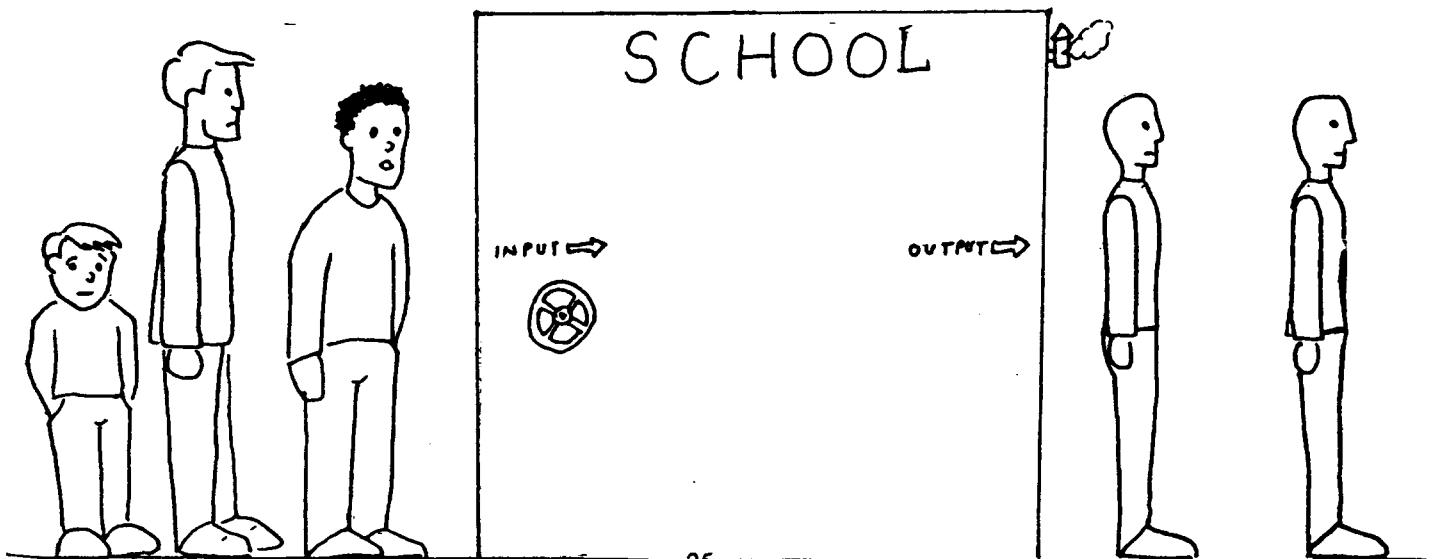
Society and school have a special relationship. Society determines the kind of graduates it wants and the schools invest in a system that produces the type of graduates requested. If society is on the wrong track, then schools are most likely on the wrong track as well. Which changes first?

We have asked ourselves what knowledge we need in order to survive, and also how we learn wisdom, but perhaps we need to go further and ask ourselves if this learning can only happen in schools. We may even ask are schools obstacles to learning?

Do schools produce people who are independent, self-respecting, imaginative, ingenious, and self-reliant? Do they make people understanding, compassionate, and cooperative? A few schools seem to succeed. How do they manage it? How can their graduates change society?

Universal and Particular Standards

By educating ourselves we seek to understand our world better and try to improve it. However, this tendency to change can also be seen as a form of dominance by one view of



what the world should be over differing views. The dominant view is that of the Western European experience in science and technology, as well as logic and human rights. Should these standards be universal and applied to every society today in order to assure our survival as a planet and a species? What happens to societies based on different traditions and experience? Are they homogenized into a universal culture or can their diversity be retained?

When we try to bring the solution of education to all societies a similar problem arises. Education means literacy, and one of the aims of literacy is to give people the ability to read manuals about agricultural topics, health, nutrition and sanitation. This is important survival information but it won't work if imposed with traditional means of instruction wherein the teacher is the authority and the people are the accepting robots. People learn best under two circumstances: if they decide that they need the information that is made available, and if they can relate the new knowledge to what they already know. This is an approach that is particularly important in bringing new skills and ideas to people who may be illiterate in some ways, but who have a rich base of knowledge in others. Starting with respect and imagination in finding links of communication, the conviction grows that the job is done best when the people themselves take it over. Ultimately, they must judge what they find useful in universal standards of knowledge and techniques, and what they wish to retain of their traditional ways.

In trying to aid and support the growth of developing countries, industrialized nations are sometimes unaware of the benefit that traditional values and different systems of knowledge bring to their people. Whether these societies are tribes, national groups or ethnic minorities in urban or rural settings, their children learn what they need to survive in their environment through observation and

participation. They learn disciplines such as "veterinary sciences, social psychology, meteorology, ecology, zoology, geography and herbal medicine."¹² They are not alienated from their society but grow up learning confidently how to be a part of it. They are motivated, their education is relevant, and they are given the respect and the responsibility of pulling their weight in the group.

These social concepts are fading in developed nations. Nations should share their cultural experience with each other and engage in a form of give and take.

These differences and particular standards are truly resources for human survival. Although we still need universal standards to deal with the larger problems, we must not destroy diversity by imposing universality.

Indoctrination

Indoctrination is the teaching of the principles or viewpoints held by partisan or sectarian groups. It is used to persuade people to accept certain ideas rather than to explore alternatives. Information is selected or suppressed. Ignorance and misinformation can deter people from seeing conditions as they are and working for reform. Institutions often view any desire for change as a threat to their power; they may therefore censor education, and use it as a tool of mass propaganda to gain the support of young people. The influences people experience in youth is long lasting and will affect their ideas and behavior as adults.

One of the most influential propaganda tools is the media. What is disclosed and more importantly how it is presented affects the opinions and actions of people. Sometimes the media will distort the truth, or use gore and scandal to sell stories. Important information on public affairs and international

problems is often passed over as the media wants to appeal to our yearning for adventure and excitement.

Television is the most powerful of all media, and imparts information directly and subliminally on many levels. Can the public be educated to filter out influences, or can the media be disciplined adequately to prevent abuses? Who controls those who decide what needs to be controlled? Education for protecting the truth is an enormous and exciting challenge.

The public can be manipulated by the textbooks used in national school systems. Texts, especially those on national histories and cultures, stress favorable rather than critical viewpoints. Some countries are becoming more objective in teaching the past, as they realize how bias and prejudice can hamper their future. History exams were canceled in the Soviet Union last year because the old textbooks had to be rewritten to accommodate interpretations that the new freedom of information and expression allowed.

It is a wise institution that believes freedom to change the system is better in the long run.

Indoctrination through education is a process which is used to suppress critical thought and spirit, and to diminish the individual students into people with no separate identity and without the will to oppose the system. People who freely accept ideas are stronger supporters of whatever institution holds those ideas. And if one particular doctrine fails to answer the needs of people over time, free discussion will lead to a better understanding of how to adjust it. It is a wise institution that believes freedom to change the system is better in the long run.

Freedom of Expression and Opinion

Imagine living in a society where everyone wore tape over their mouths and it seemed a perfectly normal situation in an environment where conversation took place without advice and criticism. It sounds quite dull, doesn't it? Well it's an extreme view of what can happen (and does) to a society when freedom of speech and freedom of opinion are abolished. When these rights are a part of everyday life, they become commonplace. Withdraw these rights and the true impact of their importance is revealed. Most of us take for granted our ability to express ourselves and our beliefs freely. Most of us never realize that without some fundamental education we would be limited in our ability to form and convey a cohesive and rational position. We could not help but be swayed or sometimes even bowled over by those in power who would take advantage of ignorance for their own self interest or their conviction that they alone knew what was best.

Freedom of expression is not only essential for the survival of humanity with diverse cultures and individuals, but is also important for the complete and valid education of the next generation.

Freedom of expression and opinion must exist to enable people to grow into responsible and participating citizens. The value of education is limited if it can not be used to contribute to society. Everyone should have the freedom to speak their minds; it is more than a right of a citizen, it is a basic human right which "includes the freedom to hold opinions without interference and to seek, receive and impart information and ideas through and media and regardless of frontiers."¹³

Discrimination in Education

The fundamental human right to education, and the development of one's intellect to the fullest, is often denied because of prejudices expressed in the form of discrimination.

Discrimination in the educational system not only deprives those being discriminated against of the chance to develop themselves but it also denies society the benefits of their talents. Talent is wasted as a result of discrimination by race, religion, sex, age, class, ethnic background, and disability. Unequal educational opportunities lead to future inequalities as the well-educated fill the best paying jobs.

Racial discrimination is reinforced by education. Racial minorities or, as in South Africa, majorities, are sometimes denied equal educational opportunities. An education that is discriminatory also teaches and justifies discrimination. To this day, stereotypes in textbooks give the message that prejudice is acceptable.

Many ethnic minorities find their cultural heritage endangered because the available schools teach only in the majority's national language. Multilingual nation states have many problems in preventing discrimination in education and in trying to satisfy the needs of the majority and all their minority groups.

Class and social discrimination also exist. In countries with local funding and local control of education, schools in better neighborhoods, serving wealthier children, get more money and provide more benefits than schools in poorer districts.

Other forms of discrimination occur against people of different religious backgrounds or those who start their education as adults. The disabled are a special case. Often their needs are not heeded, understood, or respected; they are looked down upon and they lack access to

the training needed to gain the confidence to find ways of managing their disability and leading a useful and productive life.

...two thirds of children who never go to school or drop out at an early age are girls.

Women

Although women constitute 51 percent of the world's population and one third of its labor force, two thirds of the adult illiterates are females. A girl born in South Asia or the Middle East has only a one in three chance of completing primary school education, and two thirds of children who never go to school or drop out at an early age are girls.

Discrimination against women in education has been an almost universally accepted practice. As a result, women are less educated than men in many societies. They have had fewer opportunities to develop their talents and intelligence. This discrimination deprives societies of women's insights and abilities.

In developing countries, prevalent economic and social conditions prevent girls from continuing education beyond the primary school level. Poor families in countries with no social services must set priorities about the investment of their earnings. In some cultures sons' education is seen as more important because men will stay on and support the parents in old age; daughters will eventually marry and live with their husbands' families.

Girls fortunate enough to continue to secondary education find the curriculum differs according to gender. They are usually trained for nurturing and service professions, such as nursing, teaching, and secretarial work; then they study the humanities or social science. Boys are offered more choices for studies they would like to pursue. However,

they are often pressured into mathematics and sciences by societies believing these choices are best suited for the male intellect. The question arises: do women really prefer the humanities and social sciences? Is there a fear of failure or appearing aggressive and unfeminine that limits many women's choice? Such prejudices harm both sexes and imprison them in stereotypical molds.

Education for women is vital for the development of Third World countries. Without women, sustainable development is virtually impossible. Girls' education is inseparably associated with better child health and nutrition, and lower levels of infant mortality. Each year a girl spends at school is associated with a drop in the infant mortality rate of approximately 9 per 1000, and a decline in the number of births. Only one third of this effect can be accounted for by the fact that more educated women tend to belong to better off or urban families.¹⁴ Spacing the birth of children is essential because it affects the health of both mothers and children. Women would be relieved of the physical and mental strains of having too many children too close together. There would be a reduced need for the more than 100,000 known illegal abortions and 500 reported deaths which occur daily, worldwide.

As governments acknowledge the pressing need for education, they discover the benefits of a system of education for all. They then proceed to expand educational facilities to increase the focus on women. For it is not only the basic right of women to an education, but the productive participation of a growing number of educated and skilled women contributes significantly to the economy of a nation.

Apartheid

In South Africa education is a very controversial issue because of the large

disparity between the schooling allotted to white and black Africans. The state policy of "Bantu Education" established 30 years ago, specified that blacks should not receive an education suitable for jobs beyond their proper station. This year, in the worst results in five years, only 42 percent of black high-school seniors passed their final examinations. This statistic may be even smaller because of the lenient standards of the Department of Education and Training.¹⁵

In 1976 the first real manifestation of black dissatisfaction with schooling took place in the famous "Soweto Uprising." It was intended to be a peaceful demonstration by black children against learning Afrikaans (the official language of South Africa) in school rather than English. They felt that learning only Afrikaans would limit their access to learning about the world and make them dependent on the white power structure of the South African government.

This peaceful black protest was inflamed by the violent reactions of the government into a nationwide confrontation, which left 575 killed and 2389 wounded. The excessively harsh measures taken by the State led to an even more desperate black population seeking change not only in the educational system, but in the entire political and economic framework of the Apartheid regime as well. Throughout the 1980s children boycotted schools; students marched chanting slogans, such as "Liberation before Education," throwing stones at oncoming police and army vehicles.

The Soweto Uprising gave birth to a more militant generation unwilling to compromise their convictions in the face of death. Four thousand went into guerrilla training outside the country as a result of the Soweto Uprising. Those who stayed suffered the government's brutal reaction to their protests, including detention and torture.

Earlier children were encouraged to stay away from school to protest discrimination, now they are being urged to stay. All South Africans are beginning to realize that they need educated youth to facilitate the smooth operation of a post-apartheid country in the future. As increasing value is being placed on the education of blacks in South Africa, the slogans are changing from "Liberation before Education" to " Education for Liberation."

What Can We Do?

The Structure of Society

Suppose that...society was structured from the bottom up, that decisions... were made by those at the local level and "trickled up" to the central authority.

Societies appear to be organized so that necessities are produced and people have the amenities they need to live secure, happy lives. However, most societies are organized from the top down. Important decisions are made by governments whose priority is the perpetuation of a system that they consider will benefit everyone if the top groups of society benefit first. These "trickle down" political and economic systems are not really working well because there are too many people in the world who do not have what they need, and whose poverty and alienation will eventually threaten those who do.

Suppose that all this changed and society was structured from the bottom up, that decisions which affect peoples' lives were made by those at the local level and "trickled up" to the central authority. Then the focus for priorities might become the people and the quality of their lives. Resources might reach the billions who are poor, desperate, and convinced that no change is possible and give them hope and new opportunities.

Such a change in the structure of society can only happen if majorities of populations who understand the problem have the will to change it. What does "will" mean? First it requires an education for ourselves and others so we can understand the complexity of world problems, become knowledgeable about technology, economics, politics, the way people think and behave, and the values that make them human. Then it means finding jobs and a style of life that contribute to making life easier, more productive and happier for people. There are as many ways of doing this as can be imagined, once we start thinking along those lines. And finally, it means being politically active and participating in the process of decision making. That is actually the hardest part, because it means giving up our lazy grumblings when we criticize the decisions made for us by others. Where freedom, democracy, and "people empowerment" exist, they will survive only if we the people are the watchdogs of our representatives and make certain that they do what they are supposed to do for the people they are supposed to serve.

Education as a Subversive Activity

Education can bring about change, and change can be threatening. One effort to prevent change, popular in the past, was to deny the education that would liberate people, so that they were left ignorant in a "culture of silence."¹⁶ Education, for political as well as economic reasons, was not brought to the poor in the villages of the Third World, nor to the urban slums all over the world. Lack of education helped to perpetuate oppression and deprived people of the knowledge to be self-confident and self-reliant. However, this deprivation is now seen to cause grave economic problems.

Today a concern of governments is to educate all people, at least through primary school, and utilize their human resources to solve the

problems of poverty and underdevelopment. However, instead of oppression through the denial of education, established institutions may perpetuate domination through the wrong kind of education.

The ideas of Paulo Freire have influenced many educators who understand the political nature of education. It does not take much to help people realize that they are dominated by others. It is more difficult to help them learn to help themselves. The techniques Freire developed in Brazil (which led to his imprisonment in 1964) are very relevant today, in both the developed and developing worlds.

Freire begins with a profound faith in the intelligence and ability to learn of every individual. Too many people accept their subservient position because they accept the low opinions that others have of them. The problem is then how to make learning relevant to people so they see their education as a way out of their helplessness and, in many cases, their hopelessness also.

This empowering education is based on a system of give and take between students and teachers. The students have to struggle to understand and explain their world, because by personally defining reality, it becomes yours, not merely someone else's perception of it.

...liberation of the oppressed also liberates the oppressor from the need to oppress.

Thinking critically is an essential element in this education. Deliberately or not, many kinds of education inhibit critical thinking. Such education Freire calls the "banking system"; it aims at concealing certain facts and minimizing extensive dialogue and the use of imagination. The students are loaded with facts to memorize, or "bank," and thus turn into robots, simply storing information

that teachers give them. They are not taught to understand or question information. The teacher becomes the supreme source of knowledge. The students will theoretically shy away from all initiative and responsibility for learning, believing that the teacher or the institution knows best and that they themselves are only ignorant students.

In the short term, education can indeed be dangerous to governments or vested interests, because education as a critical process may subvert the power and influence of institutions. In Paulo Freire's view, liberation of the oppressed also liberates the oppressor from the need to oppress. It is a liberation that makes us all more human.

Education for Hope

The meaning of the original Greek word "schol" is "leisure." In this age, we tend to forget this and see education only as a way of preparing for life, work, and success. Perhaps the reason why people are losing interest in learning is because we have overlooked the fact that it can be fun.

Suppose learning could be organized in different ways, perhaps through a "network" of individuals and groups wanting to learn something and others capable of teaching it. Schools would become facilitators of learning instead of bottlenecks through which students must squeeze in order to get out into the world. This is what Ivan Illich suggests.¹⁷ People should have access to information and the possibility to share and discuss it with teachers and other learners.

Teachers to be helpful would have to find in themselves what they would be trained to find and "lead out" in students: curiosity, courage, respect, and love. There would be three kinds of educators:

□ Information network creators. This role requires a sophisticated knowledge of

computers as well as an understanding of complex relationships within any particular subject or skill. It means an understanding of both hardware and software capabilities.

☐ Resource people to guide students through the networks. This requires the skills of librarians, media specialists and teachers who can both identify and stimulate a student's abilities and interests.

☐ "Scholars" and "wise men/women" who can guide the students through the intellectual inquiry itself.

This type of learning supports a moral and social position: everyone has access to this education, and it is shared. There is no elitism, whether derived from power or training. People would be linked through modern technology to learners all over the world. Barriers would break down, new ways of understanding discovered. We could become a human community of learners, sharing our problems and finding the hope and ingenuity to solve them.

International Education

"C'est donc vers un nouvel humanisme que l'enseignement international doit déboucher. Un humanisme qui reflète une culture de *l'homo sapiens*, un humanisme qui respecte les droits de l'homme aux aspirations les plus légitimes de son être et à sa dignité d'être humain. Ceci n'est pas possible dans l'ignorance des hommes, de leur histoire et de leur vie passée et présente."

Robert Belle-Isle
Director, UNIS, 1978-1985

International education is a term widely used by educators interested in producing a generation of young adults capable of dealing with the problems of the world as a whole. There is some confusion about the meaning of the term. International education can be defined as the study of different countries and cultures or as learning carried on in an

"International studies" is not a course one can take ... but a way of thinking...

international environment (having both multinational students and faculty). It can also refer to an education picked up in many countries.

International education is a tool for helping students become better citizens of the world. It tries to include knowledge about matters of importance to all corners of this planet (science, history, religion, art, culture, civilization, etc.). But as we cannot know everything about every country and culture, a more realistic approach to international education is to adopt an international perspective. "International studies" is not a course one can take in high school or university, but a way of thinking in every subject. It involves being aware of the world outside one's small circle and being concerned about what occurs there.

International thinking means seeing the world as a whole. By opening up to new ideas and new ways of seeing problems, one's tolerance for others' differences grows. Learning different languages must become a priority because language communicates culture and ways of looking at the world.

International education can change one's sense of identity, since one may begin to feel like a citizen of the world instead of a particular nation. Ideally one will learn to fit in anywhere and relate to everyone. However, until everyone becomes a citizen of the world, individuals may feel very confused since they may not quite belong in a specific place they can call home. They may begin to take differences for granted, but until others do, they may feel pain if they are reminded that the present world is not always hospitable and tolerant.

Because people currently being taught

through international education are a minority, they have to work very hard to retain their values and find like-minded friends outside of the school environment. International education is an important way to reduce global conflicts, but until it is adopted universally it can only fill a small fraction of its potential for changing and improving the global community.

The Convention on the Rights of the Child

In 1989, we celebrated the 30th anniversary of the Declaration of the Rights of the Child, passed by the UN General Assembly in 1959. It is based on the principle that "mankind owes to the child the best it has to give."

The Declaration, though widely supported, had no force in international law. In 1979, the International Year of the Child, Poland suggested the establishment of a Convention that would concern itself with the protection and rights of children. "Conventions" are considered international law, and countries signing them incorporate their provisions into their national law.

This proposal gained a lot of support, and the UN Commission on Human Rights prepared a Draft which was completed in 1988. It was adopted by the UN General Assembly on 20 November 1989. The Convention will become part of the body of international law when it has been ratified by twenty countries.

The Convention recognizes that all children under the age of 18 have the inherent right to life, which includes the protection of a family, health, and education, and the freedom from abuse and discrimination.

As children cannot be separated from the society in which they have grown up, protecting them causes ripple effects in the rest of their society. It makes people and human resources the primary concern of

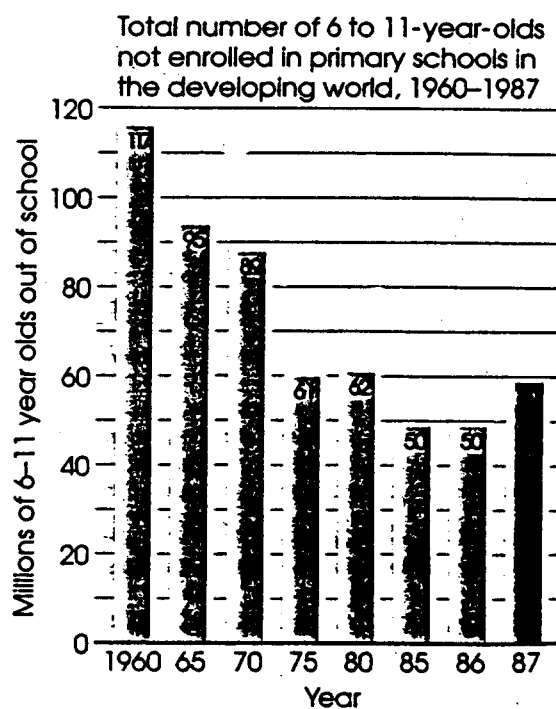
governments and institutions. Caring for children is not only a humane thing to do, it's also a practical way to insure that there will be a future for them.

World Conference on Education for All

The World Conference on Education for All, sponsored by the United Nations Development Programme (UNDP), the United Nations Educational, Scientific, and Cultural Organization (UNESCO), the United Nations Children's Fund (UNICEF) and the World Bank, is to be held in Jomtien, Thailand, 5-9 March 1990.

Fig. 2 Progress reversed

The 1960s and 1970s saw a rapid expansion of primary schooling in the developing world, reducing the number of children out of school to 50 million. In the mid 1980s the proportion of children enrolled began to fall while the total number of children continued to grow. As a result, the number of children out of school has increased to 60 million – the first significant rise in 4 decades.



Source: Population estimates and projections by the UN Population Division and estimates of primary enrolment calculated from the UNESCO Statistical Yearbook.

This is the first international conference to bring together partners in education and comes at a time when education faces its most serious crisis to date. Nearly a billion adults - a fifth of humanity - cannot read or write and almost a hundred million children have no chance of schooling.¹⁸ Even with such appalling statistics, many governments are not able to provide financial support for minimal education. The sponsoring agencies therefore believe that only worldwide action can meet a challenge of such magnitude.

A World Charter on Education for All, as well as a Framework for Action to Meet Basic Learning Needs will be adopted at the Conference, and three main targets are to be reached by the end of this century. The first goal is to improve primary education and make it widely available. The second is to cut the adult illiteracy rate to half its 1990 level.

The third is to provide more educational opportunities to meet the increasingly diverse learning needs of the population. This includes providing literacy programs, skills training, and specialized education on topics such as health, nutrition, safe water, child care and family life.

This new vision of education emphasizes learning-competence and self-reliance. The conference is a statement on the part of the United Nations that education is a priority. However, the optimism that "education is part of the solution, not part of the problem" may not be warranted if some of the problems plaguing the educational systems are incorporated into these new ones. People who lack education have high hopes for its benefits. They should not be disappointed by unimaginative policies and methods of putting them into effect.

Conclusion

As students, we have long since tired of all the feathery words and vague hopes of what students must or ought to do. The hard facts about the educational crisis presented in this Working Paper contradict the educators' hopeful prognostications for the future.

Solutions can no longer be left to the educators but must also become the responsibility of the students.

Students need to take full advantage of the education that they are now offered. These words are worthless without the conviction that education will, in the end, contribute to an amelioration of one's own and others' lives. This conviction is the will and the hope.

The adult world when possible provides the physical resources of schools, teachers, and books. We have a right to this much. Once we have these prerequisites, we can use our talents to improve our system of education.

The responsibility to use our learning "wisely" is then required. Our conference emphasizes the theme that through education we will continue to survive. As students we have a right to the best education our communities can offer, but we must acknowledge that, as we get older, we will have the responsibility to return something to our communities. This mutual responsibility is a covenant between the young and the old and an affirmation of the future.

Perceptions

Throughout this Working Paper, we discussed the problems of the education system and the need to change it. However, there is one concept that has not been touched on: what happens within the schools and the attitudes of teachers. Yes, there are many things wrong with education as a whole, but some faults lie inside the schools.

Most teachers seem to be very comfortable with the lecture method of teaching. Ever wonder why the students who get the top grades are the ones who sit quietly in class and absorb information instead of questioning it? Many instructors seem to prefer standing in front of rows of students doling out facts and giving them grades according to who can spit them back better.

Those of us who would rather be fully convinced about what we are learning talk back in class, questioning the facts that are thrown at us. We are supposed to learn independence and critical thinking, but this is not always the message that is conveyed in the classrooms. Those of us who speak out and question teachers are developing our intellect in thinking out as many of the possibilities and implications about the world as we can. We are challenging our teachers to get at the truth. Yet this search for reality is not always rewarded.

We are the ones that appear in the middle of the "curve." We don't sleep through class, but we refuse to be programmed like robots by the system and many of its instructors. We are the ones who get the mediocre grades. We are doing the most active learning when we do not docilely accept one view as the truth.

Our grades are defined by how easily we adjust to particular teachers and their style of teaching. We are conditioned to drink in information and then spill it back out, not necessarily having processed it. We are asked to swallow our questions and doubts, and only discuss what the teacher wants us to discuss. Developing other ideas might mean questioning authority and that is unacceptable. I am a student who likes discussion; I cannot deal with sitting, staring, and just accepting what teachers say. I am a B student because I talk back.

Analia Penchaszadeh

Memories of Learning

I was six years old in the second grade, and I couldn't read one word of English. I was ashamed of this. Especially in class, where there were three reading groups: the advanced, the middle and the "slower group" - my group.

One day I had to take a letter home to my parents. Later I found out that it said that I couldn't read and needed further help. On that same night, I sat with my mother who tried to teach me how to read. She too was impatient and angry. But I think that when I sensed her disappointment something sparked inside me.

I remember it exactly. I was sitting on the sofa with my mother very close to me. We were the only ones in the room. It was quiet. The room was dim, there was only one light on. It wasn't a very bright light but it provided warmth and security, when all of a sudden I started reading straight through, to my surprise and my mother's as well. My mother was so proud. I felt it too!

Wow! There was a rush of adrenaline in me. I felt like a mountain climber who has just reached the top of the highest mountain in the world.

Rokhaya Cisse

When I was 10 years old, I learned how to read and write Urdu. I had always known how to speak the language since my parents had raised me with it. But I was not what you would call literate.

This new knowledge formed a closer bond between myself and the culture of my country. I felt more like a Pakistani than ever before and I was eager to exercise my new ability. On my next trip to Pakistan, I read all the billboards and everything else I could set my eyes on. I felt so proud that I could finally read Urdu.

Kamal Ahmed

It was in first grade. We had math homework of small addition and subtraction problems. There was one problem: 1 minus 3 to which the answer, at that time, was that there was none. I, however, decided the answer was minus 2. I was very proud of myself, but when we had math the next day my teacher would not listen to me and said only that my answer was wrong. Nevertheless, my father had told me it was correct and when we finally got to negative numbers later in grade school, I was thrilled and told everyone of my realization in first grade.

Monica Reid

"When plants flower, it is a process that cannot be stopped. When they start, they can't go back. So flowers have to have a method of knowing when it is right to flower. Do you understand? No? Okay, let's try again...It's like World War I...Once a nation mobilized it couldn't stop; it began a chain reaction that could not be undone. Do you follow? Good. Now flowers are the same. Germany had to make sure it was exactly the right time to begin mobilization because a full-scale war had to follow once it started. Flowers need to know, just like Germany, exactly when they should begin to flower". I understood! I was learning. Not only about flowers but also about World War I. Of course, flowers must have a mechanism of timing. It all made perfect sense.

Analia Penchaszadeh

When I was 7 years old I moved to China for three years. This was from 1979 to 1982, at a time after the Cultural Revolution when Deng Xiaoping was in power and had started to move China slowly in the direction of a market economy and larger political freedom. The school I attended was Fang Cao Di elementary school, which consisted of one building for foreigners and one building for the Chinese students. At that time there were still not many foreigners in China, so my class had only 3 other students. My first memories of China are of being completely confused because I did not speak the language. On the first day of school I remember being brought to my class by a teacher who only spoke Chinese and I didn't understand anything of what was going on. From that day on all my classes were in Chinese. I was forced to learn the language and I slowly started understanding what was going on. It didn't take very long.

Fang Cao Di practiced very strong discipline. We had school six days a week. Our school day started at 8:00 am and finished at 4:00 pm. We would get two hours for lunch every day during which most students would go home to eat. On Tuesdays and Saturdays we only had half a day of school, and were let out at twelve noon. In the classes we had to pay attention and sit straight up with our hands behind the chair. If one of us wanted to ask a question, we had to place our elbows on the table with our forearms up and our palms straight. While asking questions we had to stand up straight beside the desk. Every morning when the teacher entered the room we had to stand up and say "Good morning, Teacher," and the teacher would reply "Good morning, Students." Every morning we did jumping jacks and other activities in the school yard. Afterward we would go back into the classroom, sit down, and do eye exercises. This was done to music and with instructions provided to us through speakers located in every classroom.

From first grade on we had exams in school at the end of each term. For two or three weeks before the end of each term the teachers from each subject would go over the material with us and help us to review what we had learned and prepare us for exams. At the end of each term the names of the top students in each subject would be written on a board in the school corridor and a red flower or a gold star would be pinned by each name to indicate their achievements. The same type of award would be given to the students who had been most helpful toward other students.

The third and last year I lived in China I moved from the international section into the section with Chinese students only. The difference was enormous. From a class of 3 students I was moved to a class with 42 students. The atmosphere was less relaxed, students were really attentive and school work seemed to be more important to them. On Monday mornings we would line up outside to salute the flag and sing the national anthem, and every morning we would repeat the same physical exercises with the international students.

Classes were much harder in the Chinese section than in the international section. In our text books most of the chapters included statements about how honorable it was to do well in school, to study hard, and to do exercises. There were also chapters praising Mao and the concept of equality, and there was encouragement to help other people in need and to contribute a lot to society. There was a dress code in the Chinese school as well. Most people would wear blue pants with a white shirt and a red tie labeling them as good students and helpful individuals.

Thinking back on these years I understand a lot more than I did at the time, when this way of living didn't seem anything special. Until I moved back to Norway I didn't think twice about standing up to answer questions and showing respect to the teachers. In Norway, after being laughed at many times for doing in class what I had done in China, I started to change my habits. When I think of the study habits of the students in China, and the difference between them and the students I know from the other schools I've attended, I realize how disciplined it all was there. The students in China were taught to study hard and always strive for the best, and at the same time to share and help each other out as much as they could. In Norway, the school system was much more relaxed; there, the teachers were called by first names, and were looked upon more as friends than teachers. There were no exams (until 7th grade), and homework was scarce. In class the children's individual achievements and good imagination was always praised and encouraged. Even though the students in China were never encouraged in any way to express individual ideas and imagination, the educational system was good because it upheld respect for knowledge as well as respect for teachers and other students. It also taught the students a set of

good study habits; at least I know that this experience gave me some good basic study habits, and I learned at such a young age how to take exams.

I can't really say which educational system I think is better, since I realize that not only is it important to develop social awareness and to work in and for a community, but it is also important to have encouragement for individual growth.

Mette Munthe-Kaas

Notes

- ¹ Population Newsletter, United Nations, New York: June 1988.
- ² World Population at the Turn of the Century, United Nations, New York: 1989
- ³ Information Kit: World Conference on Education for All
- ⁴ Marjorie Reeves, *The Crisis in Higher Education: Competence, Delight and the Common Good*, Open University Press, U.K.:1988.
- ⁵ The New York Times, February 5, 1990
- ⁶ Grenfield, *Mind and Media*, Harvard University Press, 1984, p.15
- ⁷ ASM News
- ⁸ *The State of the World's Children*, 1990.
- ⁹ Ibid.
- ¹⁰ Margaret Peil, *African Education and Their Societies*, *Comparative Education*; No. 2, Vol.18 1982.
- ¹¹ Ivan Illich, *Deschooling Society*. Harper, New York: 1970, 1983
- ¹² Fugelsang, *About Understanding*, Dag Hammarskjold Foundation, 1982, p.119
- ¹³ Universal Declaration of Human Rights, Article 92
- ¹⁴ *The State of the World's Children*, 1990.
- ¹⁵ The New York Times, December 31,1989.
- ¹⁶ Paulo Freire, *The Pedagogy of the Oppressed*, New York: Penguin, 1972, 1978.
- ¹⁷ Ivan Illich, *op. cit.*
- ¹⁸ Information Kit, World Conference on Education for All, 1990.

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