

Higher Education in a Season of Change

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It is the purpose of this paper to make an argument for re-thinking how and why adults should be educated for the future.

Turmoil in Education

There is an awareness that something is happening, like the feeling when spring is in the air. We all sense increased speed in the pace of change. Some feel that strategic adjustments will solve the problem, more money to faculty, increased technology, more funding for research etc. Others feel there must be radical

Colleges and universities are being assaulted from several directions with new competitors, new technologies, and new approaches to education. Many have chosen to ignore the warning signs, hoping it will all just go away. Others have rolled out a few online courses or have encouraged deans to develop new programs. Few have developed a coherent strategy for ensuring success in the new environment.

R. N. Katz and Associates
"Dancing with the Devil- Information technology and the New Competition in Higher Education

change in order to serve totally new requirements. Education systems in former industrial countries are in great turmoil. They are pressured by the change from industrial to knowledge societies and haunted by ghosts of societies to come. Rolf Jensen, lecturing on his book *The Dream Society* pointed out that the time line for societies is getting smaller and smaller and that the information society will be short lived. He is not alone in his thoughts. Ian D. Pearson, who focuses on technical development says we will "shift to a 'care society' where people gradually concentrate more on the human side of activity".¹ These dramatically diminished societal changes press education systems all over the world, for it is education that is society's adaptation system. It will be difficult for education to keep up with the speed of these changes.

Who should be educated?

The student population in tertiary education (all education after secondary school) is no longer in its late teens and early twenties. All ages are enrolled in University studies. The age for bachelor degrees is highly varied. In many OECD countries twenty-five percent are over twenty-eight years old when they obtain their degrees and in Denmark, the same twenty-five percent can be 30 or 33 years old. In other tertiary education there is also an aging student body with an even wider age range than at the university. Mature students are re-entering education particularly in the Scandinavian countries.² People are retiring earlier and blowing life into the term "life-long learning". They are healthier and soon they will be needed back in the workforce, and many will

¹ Pearson, I.D., *The next 20 years in Technology: Timeline and Commentary*, Futurist, Jan-February 2000.

² Education at a Glance - OECD Education Indicators 1998, P. 16.
http://www.oecd.org/els/edu/EAG98/eag98_1.htm

want to keep working. Governments wanting to conserve their retirement monies and fill jobs as the population ages are raising the retirement age; Japan is increasing from 60 to 65 and in Sweden there is a discussion to raise the retirement age from 65 to 67.³ For this they will need to renew their education. Sweden has made a specific, five-year effort to raise the general level of education of for students who never completed secondary school, bringing a wide range of people back to classrooms and distance courses.

Why should adults be educated?

Since 19th century, Americans have held the belief that higher education should be practical and that meant the education of the industrial classes. A modern example is Johnson & Wales University gives a modern example in its mission statement "to empower its diverse student body to succeed in today's dynamic world by integrating general education, professional skills, and career-focused education." They desire "...to equip students with the conceptual and practical tools required to become contributing members of society and to achieve success in employment fields with high potential".⁴

While the purpose of European higher education has been more knowledge for its own sake, a rethinking of the goal of education is occurring. In the wake of a struggle with heavy unemployment, the current insufficiency of graduates in the natural sciences and a financial crisis, European universities are changing. Helmut de Rudder, University of Lüneburg, Germany reports that "of all highly industrialized European welfare states and the expansion of higher education ("massification") have led to an underfunding.... Institutions are expected to do more with less, become more efficient, do their own fund raising (the new autonomy), be more accountable, and control and improve the quality of what they are doing."⁵

Potential employees and employers share a dream of higher education, each for their own reasons. For the employed, higher education levels have meant less time spent unemployed than those without tertiary education. Higher education levels for those age thirty-forty also mean 30 to 80% more in salary than those not continuing after secondary school.⁶

Employers are demanding better skilled workers as technology changes the nature of jobs. The increasing desire on the part of companies is for greater social competencies or emotional intelligence and creativity in order to be competitive in a fast paced marketplace.

³ Ringholm, B. "Alla får jobba till 67", Dagens Nyheter, debate article, A5, April 13, 2000

⁴ 1998-99 President's Report Johnson & Wales University, inside cover.

⁵ de Rudder, H., *On the Europeanization of Higher Education in Europe*, International Higher Education, Spring 2000, <derudder@uni-lueneburg.de>

http://www.bc.edu/bc_org/avp/soe/cihe/ March 2000.

⁶ Education at a Glance - OECD Education Indicators 1998, P. 25.

http://www.oecd.org/els/edu/EAG98/eag98_1.htm

These dreams of employers and employees and the revised purpose of European education are prerequisites to tighter relationships between universities and businesses. Universities are expected to turn out professionals needed in the growth industries of biomedicine, computer technology and environmental sciences. As of 1998 private sources contributed between 0-10% to tertiary educational institutions in OECD countries in an attempt to fill that need. In comparison, the United States and Japan received 50 to 60% of their funding through private sources, while Korea brought home 80 to 90% of its higher education costs from outside the public sector.⁷

European University is attentively observing the educational institutions in the United States when it comes to doing business. The University of Munich has spun off five private companies in the last two years⁸. Chalmers University of Technology is involved with business on several levels. They receive revenue from trade and industry totaling some USD 14 million/year (7% of Chalmers' annual turnover)⁹. They sponsor Chalmers Innovation which helps newly started technical companies from Chalmers and near-by Gothenburg University spin off of companies with the goal of helping them to be commercially viable and replete with growth potential. The motivation behind Chalmers Innovation is to speed up the innovation process and shorten the time to market. In addition, Chalmers maintains two science parks.

In a different view of why universities need to educate adults, Jan Sinnott and Lynn Johnson¹⁰ wrote, "The purpose (of the university) is to *enhance the personal and public growth of knowledge*." They are looking for the university of tomorrow to raise the level of "Postformal thought", which they describe as a "complex form of adult logic"¹¹. They quote D. Elias who describes five capacities that are applications of Postformal thinking:

"a capacity for intimate communication;
the capacity to see patterns in relationships;
a commitment to ongoing social transformation;
an awareness of contexts for events;
and a capacity to use technology to serve alternative social visions."¹²

Multiculturalism is another reason why we need to be educating adults. Sohail Inayatullah writes, in an introduction to Futures, Forecasting, Planning and Policy Journal (dedicated to the university of the future), that for "...the future

⁷ Ibid. P.19.

⁸ Press, E. and Washburn, J, The Atlantic Monthly, *The Kept University*, March 2000. P.47

⁹ Chalmers University of Technology, Collaboration with Industry
<http://www.indkont.chalmers.se/collabind.html>

¹⁰ Sinnott, J. and Johnson, L. (1996), *Reinventing the University: A reasonable proposal for a problem-focused university for the 21st Century*. Futures Research Quarterly, p. 62, 1996.

¹¹ Ibid., P.63.

¹² Ibid.

of education, to be of any relevance, must be authentically multicultural." ¹³ Yu Kameoka, writing in the OECD Observer, adds that the internationalization of universities and other institutes of higher education call for the teaching of intercultural skills.¹⁴ People are increasingly being exposed to other cultures through immigration, emigration or globalization. The ability to learn to discriminate between culturally driven behavior and individual behavior in oneself and others is relatively new. Adults need intercultural skills if they are to be world citizens. If intercultural skills are not taught how is one to differentiate between personal worldviews, generation's worldviews, cultural worldviews, gender worldviews or dying/upcoming worldviews?

René Descartes' seventeenth century philosophy permitted scientists to handle matter as dead and completely separate from themselves. The material world was seen as a multitude of different objects assembled into one large machine. He also introduced the objectivity of the observer. Newton already held this mechanistic worldview when he created his concepts.¹⁵ But it wasn't just science that Newton and Descartes influenced, it was philosophy, religion, thinking styles and how we educate our young and one another. This is the cultural perspective that Western countries have imposed through colonization and trade. They did so in full understanding that they bore with them "the truth". To truly meet the full spirit of Inayatullah's multiculturalism, it will be necessary to lift the backdrop of our cultural stage setting and realize that there are other cultural stages on the other side. These seem just as real to the audiences who subscribe to them as the original setting is to the person peeking through. Multiculturalism has never been a goal of any traditional university system. Now, it is a matter of respect, a prerequisite for peaceful existence and well being for commerce.

What should adults learn?

British scholar, Bruce Lloyd feels adult education should start with wisdom. Just talking about the knowledge society is not enough; we need to be very clear about what we are teaching. Is it good only for the short run, or is it workable throughout a lifetime? The terms, knowledge, information, and data are often used interchangeably but wisdom is the most important and the least defined of all. "Wisdom is a useful truth or knowledge with a long shelf life."¹⁶ Knowledge has a shorter shelf life than wisdom and information and data increasingly less. That is to say that in the Supermarket of Thought, wisdom doesn't spoil over the centuries, knowledge last as long as there is no basic change in the system, as from industrial society to knowledge society.

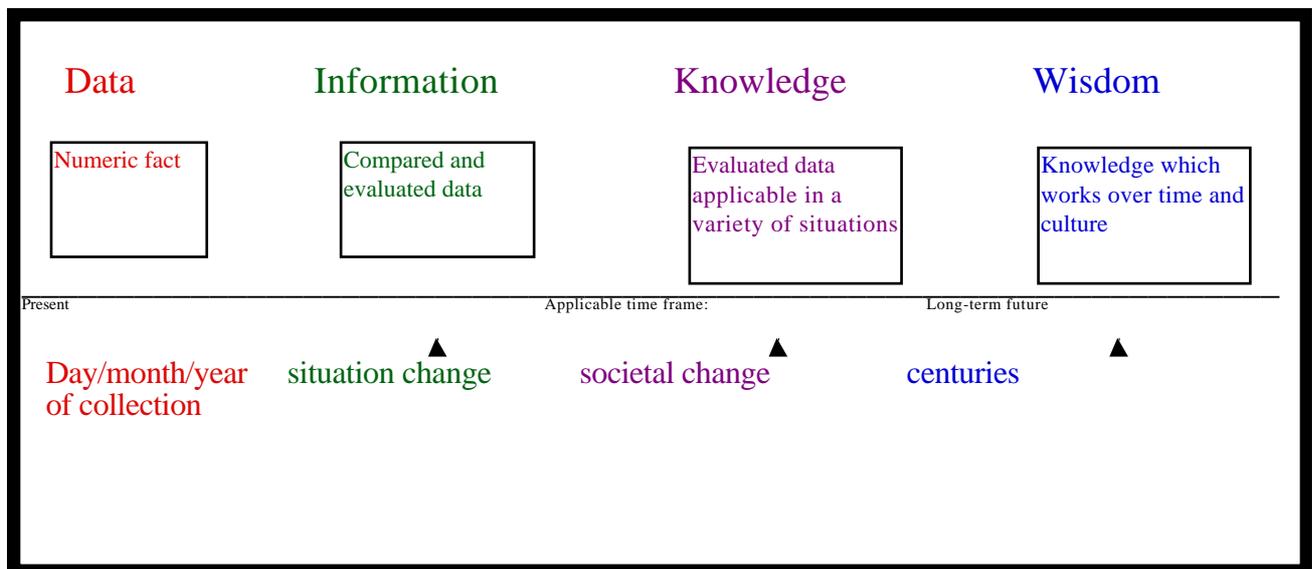
¹³ Inayatullah, S., *Alternative Futures of the University*. Futures, Vol. 30, No.7 pp.589-602. 1998

¹⁴ Kameoka, Y., *The Internationalization of Higher Education*, The OCED Observer. No. 202 October/November 1996.

¹⁵ Capra, Fritjof. *The Tao of Physics* Boston: Shambala Publications. 1993. P.22

¹⁶ Lloyd, B., *The Wisdom of the World: Messages for the New Millennium*. World Future Society's Ninth General Assembly, Washington, D.C. 1999 (Cassette Tape).

Information is only good as long as the situation it describes is relevant, and data is only good until it's "best before" date runs out.



Currently, there is no method for identifying universal wisdom. Bruce Lloyd suggests that sayings that have withstood the test of time embody wisdom. He is forming a database of these sayings from all cultures with the hope that this will be a starting point to defining what we collectively think is wise and worth passing on to future generations.¹⁷ "A stitch in time saves nine" is one such example, which if agreed upon by a policy group might result in priority on all preventive actions.

Another way of ascertaining what wisdom can be found by asking a series of questions. If we start with "What is the purpose of higher education?" and answer with: "The purpose (of the university) is to enhance the personal and public growth of knowledge (as Jan Sinnott and Lynn Johnson have framed it). Then, what is the purpose of public growth of knowledge? The purpose of personal and public growth of knowledge might be higher consciousness, citizens prepared for a democratic society, and citizens better prepared to survive in the future. What is the purpose of higher consciousness, a democratic society, or the new economy? Higher consciousness can keep us from making decisions that cause unnecessary suffering, democracy can assure a good life for all and the new economy can provide security. What is the purpose of a life without unnecessary suffering that is secure and good for all? The purpose is to provide humankind with the best possible conditions for procreation and survival of the human race. If then the purpose of education is to create the best possible conditions for survival, we are then faced with a decision. We can educate for that survival to continue on the planet earth or we

¹⁷ Lloyd, B. The Wisdom of the World, <http://www.wfs.org/Q-intro.htm>, April 8, 2000.

can educate for that survival in space or on other planets. Currently, we are doing both and some have even combined the possibilities by researching how to mine the moon and the planets for water and minerals. Accepting the logic of the above series of questions, what is the wisdom we need to learn and teach? Do we need to learn and teach the science of living within the boundaries of natural laws on this planet, or do we continue as usual using space exploration to make an escape when the environment becomes too harsh for human habitation?¹⁸

Generally, it is thought that it is best to start with the young and that teaching children about ecology will bring a behavioral change in the adult world over time. They feel that the new generation, educated in a different way, will mean a change in values and behaviors. A casual look at even the most humble of environmental statistics points to the urgency for change. It has to begin on all fronts, with children, their parents and grandparents. We need to rethink the wisdom in adult education at the same time as we address it for our children.

What begins to emerge is a body of knowledge on how humans need to relate to nature as well as how we relate to one another. Some progress is being made in the latter as the concepts of social competence and emotional intelligence begin to emerge in ever more tangible form.

There is a growing acceptance in a number of countries¹⁹ that the basic survival skills of adults need to be honed. These skills are so important that an international effort to establish standards and monitor them is being established. It is called the International Life Skills Survey. It is designed to measure skills in the adult community (ages 16 to 65) of each participant country. It is constructed to compare student results across countries and cultures. What makes this survey so interesting is the description of the skills measured. Some we recognize from days gone by with new twists and elements. Others are completely new:

Prose and Document Literacy measures individuals use of "printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential".²⁰

Numeracy Skill measures the basic tools that help adults keep up with a changing world. They are used in the home, on the job and in the community to "interpret information that may involve numbers, measurements, probabilities, shapes, statistical information, or quantitative arguments"²¹ These

¹⁸ The same technique can be used with another starting statement, such as: The purpose of higher education is to help students achieve success in employment fields with high growth potential.

¹⁹ Some of the countries involved are Australia, Canada, Czech Republic, Sweden, Norway, Denmark, Finland, France, Hungary, Italy, Korea, Luxembourg, The Netherlands, Portugal, Spain, Switzerland, UK, U.S. and OECD

²⁰ National Center for Educational Statistics, http://nces.ed.gov/ilss/skills_domains.asp, March 2000.

²¹ Ibid.

are the basics needed in order to function and take action as an independent adult, parent, citizen or worker. They are entrance skills to many technical occupational areas and mean a difference in employability and flexibility of career choice.

Cognitive Problem Solving measures an individual's ability to take an active role, with successful results, in social and political situations in the community and at work. These skills are characterized as the ability to work in a team and successfully find solutions for a problem with no previous knowledge of the solution. Cognitive problem solving also measures determination and stress management and the cognitive abilities for mastering new situational demands.

In our efforts to understand the way the human brain learns another set of Intelligences that are called **Practical Cognition or Common Sense**. This is "knowledge relevant to problems that are not clearly defined, are personal in nature, relate to everyday experience, have multiple "correct" solutions, and have multiple methods for deriving solutions".²²

Teamwork represents interpersonal skills. Here the survey will measure an individual's "information on national attitudes toward teamwork, how knowledge of teamwork skills varies across nations, and the social and economic factors that influence the development of teamwork."²³

Information and Communication Technology Literacy is defined as the ability of people to make full use of existing, new, and emerging technology, in order to be successful both in professional and private life.²⁴

Another contribution to what we need to teach comes from the work done in Systems Theory. The kind of thinking derived systems theory is very different than has ever been taught in classrooms. It has relevance for all from rocket scientists to humanists. Most subjects taught to academicians, researchers, technicians or sociologists are taught from concept of the independent nature of facts, or a cause and effect relationship. Systems Thinking represents a way to illustrate the interdependency of facts, with one variable both effecting and being effected at the same time. "To be a responsible and effective citizen in today's world" students must have the "capacity to understand, and to generate insight into systems (at all levels) composed of interdependent relationships. Students must improve their ability to see the second, third, and fourth order consequences of their decisions and actions," write a team of authors from High Performance Systems, Inc. in their Stella Research 5.1.1 software instruction book, *Introduction to Systems Thinking*. An understanding must

²² Ibid.

²³ Ibid.

²⁴ Ibid.

develop for what happens in the long-term, when the short-term is prioritized and vice versa.

How should adults be educated?

The first attempts at change are those which get away from the lecturing-professor-behind-podium syndrome. This, sit-still-and-listen model has been forced on people in many places around the globe. The painful ineffectiveness of this method for so many people has put this form of education first in the line of attack. Without rethinking the basis for the education, the wisdom to be taught or changing paradigms, education is borrowing ideas from business, industry and the community. They see that people often work in project groups or teams. This style then has been emulated and there is currently a number of learning institutions offering project-based learning. Some are thinly disguised homework assigned to groups. Those who understand the assignment earn a good grade for the whole group and some are left having not learned anything. Other students actually participate in project work that results in a useable solution to a problem. Learning institutions also note that people learn from experience on the job. Companies complain that newly hired graduates needed a thorough orientation before being able to work in the "real" world and so learning by doing was born. In adult education circles this has taken the form of experience learning, currently being offered in a number of institutions. Another variation on experience learning is the granting of credit to adult learners for documented life experiences.

Students want to go out into the real world and make a difference, a contribution. At the same time in market driven economies, governments can not afford the institutionalized welfare services they once provided their citizens. Volunteer organizations have been taking the burden in Italy and more recently in Sweden.²⁵ A number of American Universities are offering service learning.²⁶ They understand that jobs also develop in the volunteer sector and offer service learning, where service to the community is matched with appropriate academic courses. They are beginning to understand that students want practical and theoretical knowledge at the same time, without having to choose one or the other.

The largest experiment now taking place is in distance education. Universities are running into direct competition or forming partnerships with private education companies. One large difference, of course, is that private education does not have the large overhead of a campus. A growing network of financing, venture capital and angel networks are building up around these efforts in commercial, digitized, distance learning, while large universities are largely dependent on government funds, trusts and other gifts. Jim Dator

²⁵ Molin, P. Y., Arbetet, Ny Tid, Idéellt arbete ser nya former, Lokalt, p.9 March 13, 2000

²⁶ National Service-Learning Clearinghouse, Higher Education Links
<http://www.nicsl.coled.umn.edu/links/higher.htm> March 30, 2000

argues in his article *The Futures of Universities, Iviied halls, virtual malls, or theme parks?*²⁷ that distance learning will radically change universities. He paints a scene of libraries gone digital and Harvard University turned into a 1926 theme park funded by Bill Gates. Samuel L. Dunn discusses the outlines of two separate types of universities. One will "add value"(to the student) while the other will be a certifying university. Certifying Universities will offer as little as ten percent of coursework toward a degree. Their greater function will be to certify courses from a variety of external sources and grant degrees.²⁸ Dunn predicts that "by the year 2025, at least 95% of instruction in the United States will be digitally enhanced".²⁹ While these are very real possibilities for future for the university, happy-ever-after virtual education is going to be faced with the same issues of what to teach and how to teach it. If electronic courses are based on the learning paradigm so essential to past industrial growth and continue to serve the same gods, they will fail. Dator points this up when he says the "task of all education to help us learn how to `govern evolution´".

Those who understand that all learners are different, truly develop multi-media so that a variety of intelligence's are accommodated, prize wisdom over accumulated knowledge and value common sense and understanding of interdependencies will be the winners of the future. Unfortunately, that longer-term discussion is being drowned out by short-term battles. There is evidence that electronic education is the new war ground to a strife between university administrators and professors over curriculum that is swiftly being turned into "courseware" for the distance learning market. What was once the domain of teachers and professors is now being copy written and taken away from its creators. It may be said that this is a description of knowledge economy rather than knowledge society. It is a knowledge economy that serves the same principles as its forerunner. Prolonging education with outdated industrial-society commercial values will not impact radical change even if the most advanced electronic technologies are used.

Change happens weather we wish it or not. Universities, colleges and adult learning environments have their share of innovators that have been experimenting with teaching to New Intelligences, systems thinking, intercultural communications, empathy, ethics and much more. It is clear that this type of education has begun at all levels. One innovation is the emergence of fields of study with articulated value bases. The Institute for Cross Disciplinary Studies at Gothenburg University offers Human Ecology which studies how mankind relates to its environment. The discipline is set apart by a conscious articulation of values. They believe in the preservation of human

²⁷ Dator, J., Futures, 1998 *The Futures of Universities Iviied halls, virtual malls, or theme parks* Vol. 30, No. 7, pp.615-623

²⁸ Dunn, S.L., The Futurists, March-April 2000, *The Virtualizing of Education*. S.34

²⁹ Ibid, P.35

existence on planet earth. Another discipline, which articulates its values, is in the relatively new discipline of Studies of the Future. Futures Studies itself is an innovation. It, among other things, looks at possible, probable and desired futures and their consequence. In Europe, there is new program in Germany and a Masters and Doctorate offered in England at the Leeds Metropolitan University in Studies of the Future. In Sweden the prize winning Futures Studies training project, Framtidsbygget (Building the Future) unites futures studies, new learning theories, and personal development and results in the creation of societal scenarios. An innovation in attempting to incorporate many different learning styles and project work is found in Denmark. The once radical Chaos Pilots have been accepted as a part of the national education system. When the first International Life Skills Survey is taken in 2002 we might get an indication of how integrated and widespread these types of new learning programs are. Will it be a devastating blow to traditional education, or an exciting acknowledgement of new innovation?

Pulling it together

So far this article has shown that there are major changes going on in tertiary education. There is even a different audience for that education now, both in universities and other types of adult learning environments. There are two acknowledged reasons for higher education. One being to develop the living and survival skills of adults, and the other to create thinking and active professionals to fill needed posts in the business world.

It could be argued that the future of adult education is a clear choice between educating to fill the needs of the market economy or for greater social wellbeing and enlightenment of all. Unfortunately, the subject is more complex and the argument has been outgrown much like a suit of clothes that no longer fits. In order to get at the wisdom we wish to give to adults, i.e. one another, now and in the future, we need to re-think the basic conditions and needs under which humankind functions.

In an unpublished paper titled Values Based Economic System Theory, I attempted to describe some of the human characteristics and needs that underline the economic system we currently possess. In other words, it was an attempt to understand why things are the way they are. We have to be honest with ourselves about these needs, otherwise we will never be able to fulfill our educational dreams.

These characteristics or needs are:

We/they ethnocentricity, a survival instinct, which has enabled continued life and caused unbelievable devastation at the same time. Human beings value themselves and their groups over all other individuals and groups. This is not necessarily a quality only inherent in humans, but has been witnessed in animal populations as well.

Another is **an inability to know the future** which drives a strong need for accumulation of wealth (saving for a rainy season) and a need to protect that wealth. There is a certain hierarchy to what we value which is reminiscent of a dynamic Maslow's Needs Hierarchy. The farther away from basic needs the more esoteric our "valuables" become. All too often, what is valued is that which is rare or difficult to find.

The Unknown- The Survival Question. There is another question that human animals have continuously tried to answer for themselves and their groups. That is "how do we survive and perpetuate ourselves"? This question is re-tested instinctively in animal behavior. Humans are more conscious in their use of both threatening and conciliatory behaviors to survive.

The Unknown Future- The Existence Question. We value people in our societies who think they have the answer to basic questions regarding our existence, purpose and future. Through the centuries, people have given their power to those from which they received acceptable explanations of the "truth".

First survival was about finding food for the day (hunters and gathers and today's homeless) or mankind vs. Nature. Next, it was about man vs. man, "May the best man win", and now in some places on the globe we are coming around to a theme of humans in nature, more commonly referred to as environmental problems. We need to know the laws of nature and its systems in order to understand how best to survive.

In systems terms one begins with a "stock" or an accumulation of something. We could call our stock "adults prepared for survival in times of rapid change". A precursor activity would be defining exactly what this means, much like what was attempted in the International Life Skills Survey. What are the inputs or the activities that create more adults prepared for survival and what are the "outputs" or activities that diminish this stock?

In this paper I have posed a number of questions intended to stimulate re-thinking why we are educating adults in this particular season of change. New circumstances require new thoughts, and reaching those conclusions does not signal the end to our reflections, it only opens the door to continue opening doors.

In this article we see that older and mature students are re-entering adult education programs. Some of these are retired people who want to, or must, continue to work. Others left school early and now want to catch up. Some education is geared to getting people into jobs and invigorating the economy with new innovations. Other educators are oriented to enhancing personal and public growth to maintain healthy individuals and democratic communities. At the same time there is a desire to support global survival with multicultural,

technologically literate, environmentally aware and socially competent adults. Technology is pushing education in a virtual direction and the boundaries between business and education dim with every day. Educators must choose what knowledge or wisdom they want to leave with students.

In writing this paper a number of assumptions have been made, and it is important for the reader to identify those assumptions and see if they are the same for him or her. The reader is also challenged to discover what values lie behind their assumptions and build a personal wisdom that underlies their own response to the goals for tertiary education of the future.

Abstract-

In this article a number of questions are posed which are intended to stimulate re-thinking the reasons why we are educating adults in this particular season of change. It looks at several ideas for what skills will be need in the next 15 to 20 years and questions if the reasons for educating adults today will continue to have validity in the future. Education needs to support global survival with multicultural, technologically literate, environmentally aware and socially competent adults, says the author. What kinds of wisdom are necessary to insure global survival? Educators must choose what knowledge or wisdom they want to leave with students. Adoption of a new holistic paradigm is necessary, adults need to think in terms of systems and not as linear machines.