

Learning Society of the Future: Questions to Consider

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Today everywhere in the world, people of all ages are asking how educational systems can be transformed into ones truly appropriate for our time. Since lifelong learning is now essential to survival and 'thrival', how can people of all ages learn how to learn, unlearn, and relearn? How can they develop skills to deal with complexity and challenges that have never before existed? How can schools that were created for another time meet the needs of an increasingly diverse population of students? Can schools alone meet these needs? In considering these questions, let us look at new possibilities for individuals, learning communities, and an emerging global learning society.

DIFFERENCES THAT DIVIDE; DIFFERENCES THAT CONNECT

Of the 6 billion people in the world today, no two have brains that are alike. Not only are people different genetically, but also the environments in which they grow and learn create unique mental and emotional traits. People from different cultural, social, economic, and educational backgrounds have very different ways of thinking, learning, speaking, and behaving which tragically have often been the source of warfare between countries, and on the individual level, of serious conflict and causes of separation. These differences must be recognized and respected if people are to communicate effectively and learn successfully.

Viewed from a different perspective, individual and national differences may be seen as complementary strengths. Howard Gardner notes that "we are as much creatures of our culture as we are creatures of our brain." Cultures where most people are actively involved in the arts, cultures where academic achievement is most highly valued, and cultures where survival skills are essential to life produce populations with different skills and abilities that have been learned in different ways. Of course, such diversity exists within cultures as well.

When these differences are understood and valued, they can bring people together in ways that may form the basis of learning communities. The ancient Greeks had a word for such organizations. In their 'Paedeia', everyone was a learner and everyone was a teacher, and the whole community was responsible for the learning of its people. The formation of such models is essential today as we see increasing needs for greater interpersonal and international understanding. Few would question that individuals, communities, and countries must find better ways to collaborate on learning about and helping to solve critical ecological, environmental, economic, technological, and health challenges. Successful learning of a whole community begins, however, with the individual.

WHAT WE ALL HAVE IN COMMON

Nearly every human being is born ready to learn and with the capacity — during a brief 'window of opportunity' — to understand and speak any language like a native. A hundred billion neurons are already beginning to connect with each other in complex

ways that make it possible for us to think, learn, understand, remember, problem-solve, and create. The fullest possible development of the human brain depends on being nourished with sufficient food, clean air and water, love, and stimulation from the environment and other human beings.

Note the findings of Dr. Craig Ramey, at the University of Alabama, who has been researching the cognitive development of children of poor, borderline mentally retarded mothers. He set up a control group of children who were provided good health care and nutrition, but had no other intervention. Beginning at the age of six weeks, children with similar backgrounds were placed in an experimental group where they spent five days a week in an enriched environment. There they benefited from much interaction with caregivers who conversed with them, told stories, played games, and nurtured them emotionally. The control group of children remained low-functioning like their mothers, whereas the experimental group of children developed at least average intelligence. By the age of twelve, 50% of the children in the control group had failed one or more grades in school, but only 13% of the experimental group were not successful. Surely all parents must have opportunities to learn how to create environments that will foster the fullest possible development of their children, physically, cognitively, and emotionally.

Until recent years, it was not understood that the human brain can change structurally and functionally as a result of learning and experience - for better or for worse. Ideal conditions for optimal brain growth and development are enriched environments that are positive, nurturing, stimulating, and that encourage action and interaction. Dr. Marian Diamond (1998), neuroscientist at the University of California-Berkeley, describes the characteristics of an enriched environment that:

- Includes a steady source of positive emotional support;
- Provides a nutritious diet with enough protein, vitamins, minerals, and calories;
- Stimulates all the senses (but not necessarily all at once!);
- Has an atmosphere free of undue pressure and stress but suffused with a degree of pleasurable intensity;
- Presents a series of novel challenges that are neither too easy nor too difficult for the child at his or her stage of development;
- Allows for social interaction for a significant percentage of activities;
- Promotes the development of a broad range of skills and interests that are mental, physical, aesthetic, social, and emotional;
- Gives the child an opportunity to choose many of his or her own activities;
- Gives the child a chance to assess the results of his or her efforts and to modify them;
- Offers an enjoyable atmosphere that promotes exploration and the fun of learning;
- Above all, allows the child to be an active participant rather than a passive observer.

It appears that the early years and the 'windows of opportunity' they provide are critical, but deficiencies in experience can be overcome to a certain extent in environments with the above characteristics. The work of Dr. Reuven Feuerstein, Israeli psychologist, attests to the fact that mediated learning and particular kinds of cognitive enrichment that he has developed produce remarkable results. The mediated learning approach differs from typical stimulus-response activities in that the teacher is there to support the learner by offering appropriate help when — and only when — it is needed. Little by little, the

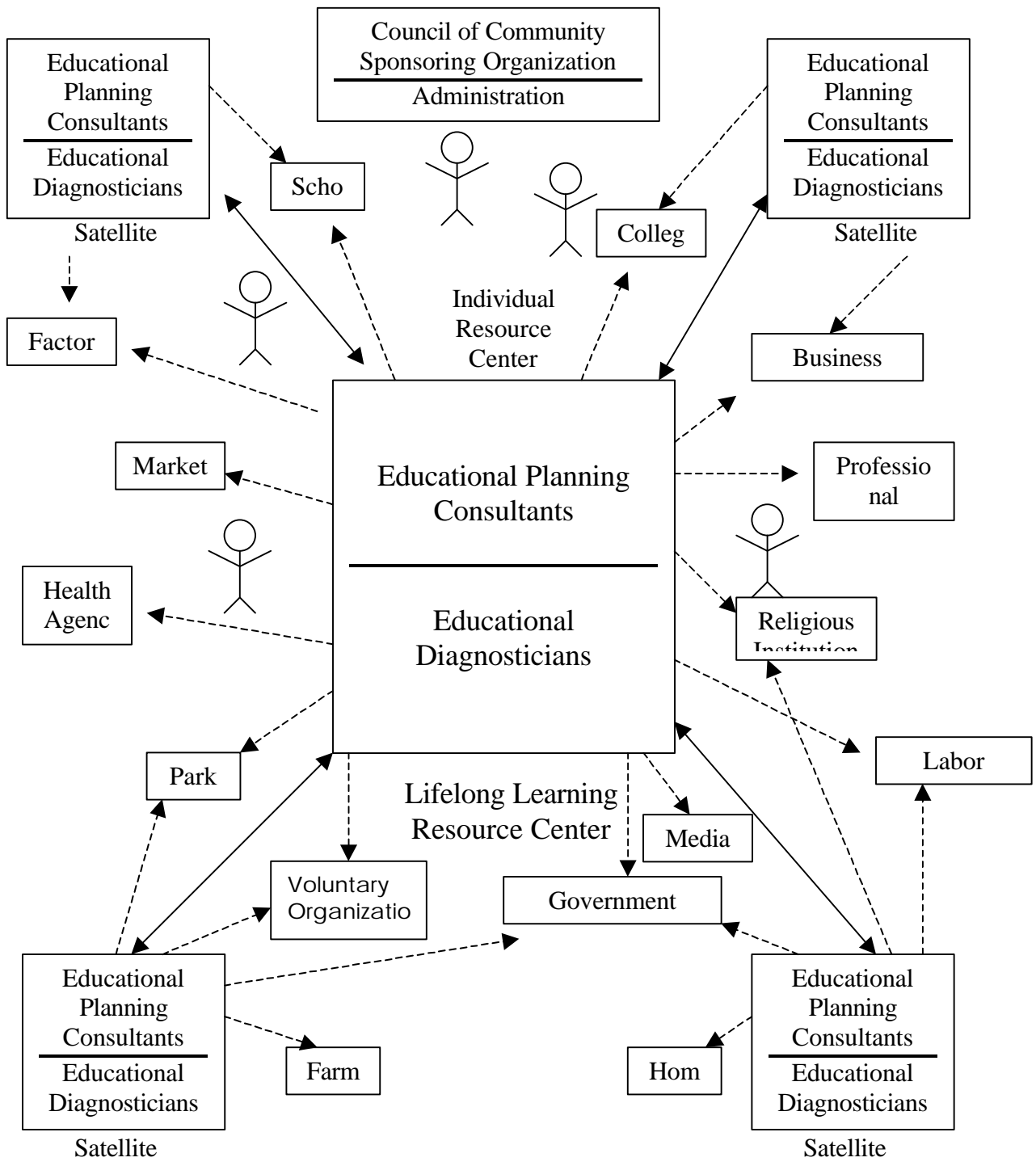
learner begins to take responsibility for his/her own learning. Feuerstein has proved with his work that "intelligence is not a static structure, but an open dynamic system that can continue to develop throughout life." Of key importance is strengthening people's ties to their native culture by respecting and honoring the mores, customs, rituals, and other characteristics of that culture. According to Feuerstein, when these ties are cut, people are deprived of optimal possibilities for their fullest development.

Many characteristics of the enriched environments that Diamond describes are appropriate for adults as well. As we anticipate building a global learning society, it is important to consider, at all ages: (1) individual differences in perception, (visual, auditory, kinesthetic); (2) different kinds of intelligence (Gardner's theory including verbal/linguistic, logical/mathematical, visual/spatial, kinesthetic, musical, interpersonal, intrapersonal, and naturalist); and (3) differences in world view (field sensitive/perceiving the whole picture first or field independent/perceiving the details first). In these differences lie our strengths and the tools we need to learn and develop our abilities, as well as dealing with our disabilities. Opportunities to learn in different modalities and understand our own unique characteristics play an important role in successful learning. Students must also be offered opportunities to understand how to utilize these traits in a variety of contexts, including those outside the classroom.

Because an important part of learning is in its application, rote memorization alone will not equip students to use what they have learned in productive, meaningful ways. Rather than focusing on learning mostly from lectures and textbooks, finding the one right answer to a given question, and demonstrating mastery of learning through standardized, true/false, short answer tests, the learner must be encouraged to question and learn actively from a broad array of sources, to consider many possible answers to thought-provoking questions, and to demonstrate mastery by applying what has been learned - or even by teaching others. The creation of learning communities and their openness to continual change in response to the needs of learners and broader community makes these kinds of learning experiences possible.

LEARNING COMMUNITIES

Over twenty years ago, Malcolm Knowles, considered to be the father of adult education in the United States, drew a sketch of a community learning center that looked like this:



A LIFELONG LEARNING RESOURCE SYSTEM (LEARNING COMMUNITY)

↔ Linkage among Resource Centers
 - - -> Linkage with content resources

In Knowles' vision, at the heart of such a community is a center with specialists who are diagnosticians, prescribers, and facilitators of learning. They are skilled at understanding what may be interfering with a student's learning, know how to support or challenge the student in different ways, and make sure that every child has a strong but sensitive adult role-model or mentor. These specialists also collaborate with teachers, parents, community members, and mentors as the students progress. Today, growing numbers of year-round community learning centers are open early in the morning for day care and through the evening for adult classes (for examples, see New Horizons for Learning - <http://www.newhorizons.org> and Communities for the Future - <http://www.bev.org/cotf>). Many offer opportunities for learning through the arts, technology, and environmental education that also bring in financial support as students do productive work as they learn. Courses in nutrition and food preparation, health care, and parenting not only offer opportunities for individuals to learn, but also potentially benefit the whole community.

Critical to the success of community learning centers is a visionary leader who is able to inspire and involve all those in the organization as partners and collaborators. Rather than top-down management, typical of industrial model educational systems, shared leadership creates an open system essential for the evolution of learning communities and a true learning society.

Schools in these communities also make use of new understandings of how to individualize learning and make it an active and interactive experience. In this respect they differ from more conventional, factory models of education. In addition to conventional reading and writing assignments, illustrating a story through a group mural; making up and singing songs about the water cycle; dancing cell division or mathematical equations; writing and performing plays based on historical events; creating multimedia reports — all result in deeper ways of understanding. Teachers recognize that positive emotion associated with such activities is an essential component of successful learning that endures.

Students may study independently or learn in groups of different sizes depending on their needs and the subject to be learned. They understand that when they are learning in a group they have a specific responsibility to help each other master the task at hand, as every student must be successful in order for the group to be successful. Students receive prompt feedback on their work, their efforts are constantly reinforced, and they are offered specific learning strategies appropriate for different subjects. The learning communities of which these schools are a part support their transformation from factory-model schools into environments in which the above kinds of activities are standard practice.

No school alone can handle the complex challenges that today's school populations present. It is now essential for schools to collaborate with other schools, colleges and universities, arts and cultural organizations, hospitals, social service, health, and welfare agencies, churches, businesses, and other civic organizations. How could such a task be accomplished? Coordinating such a complex network requires massive communication and file systems, which did not exist at the time Knowles envisioned his concept of the

learning community. Even in smaller rural villages with few institutions and services, it would be difficult to record and keep track of the community's resources, to say nothing of communicating with the rest of the world. Yet, these connections are essential to bringing about a positive, fundamental change in education.

Today, using computers, databases, and Web sites, it is possible to coordinate support systems for educating people of all ages - creating a technological Paedeia, combining an ancient form with the most current technologies. Here also are the characteristics of a continually developing global neural network, capable of bringing about its own continuing transformation. Essential to this process is the recording of challenges, failures, and successes in order to feed this information back into the system and guide its development. As new more successful educational models come into being, their stories can be shared through the Internet, thus facilitating a true paradigm shift.

At this time, although new technologies and even electricity do not yet exist in many parts of the world, low-cost, wireless computers will soon connect people everywhere with a world of information and educational opportunity. With that opportunity also come risk and further challenges. In addition to rich educational resources, the Internet holds much dangerous and illicit material. This is a complex challenge to meet without putting freedom of expression at risk. Somehow producers of content must be motivated to take responsibility for what they put forth, much as there is current pressure on industries to avoid polluting the physical environment. It is also critical to understand that technology is an important tool for learning and communication, but it cannot replace the quality of human interaction in successful learning. Nor can computers teach ethics and morality, compassion, and personal responsibility.

TOWARDS A LEARNING SOCIETY

As a global learning society is coming into being, community learning centers are beginning to collaborate with each other within countries as well as interlinking through the Internet with those in other countries. Technology has made all of this possible. The foundations have been laid and every minute of every day more connections are being formed. Our very survival may well depend on people throughout the world learning together and working towards common goals of increasing planetary and human health, security, and peace.

In The Birth of the Chaordic Age, a thought-provoking new book about the complex times in which we live, author Dee Hock expresses the hope that one day we may have "institutions that have inherent capacity for their own continual learning, order, and adaptation; institutions in harmony with the human spirit; institutions with the capacity to co-evolve harmoniously with one another, with all people, with all other living things and with the earth itself to the highest potential of each and all."

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