

Open and Distance Learning Using ICTs

—UNESCO's Perspective*

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Thank you very much for your very kind introduction. Being associated with the Chinese National Commission for UNESCO, I suppose what else you can say about anyone coming from UNESCO except a few good words. So, thank you for your kind words. But I again repeat I really truly feel very comfortable being with this group of people. I said I used to be profited very much. But that is also the reason for my discomfort because I have not been in open and distance learning for the last at least 7 or 8 years. Nothing in this area and I'm sure that there had been many profound developments. So, that is why I feel deeply uncomfortable, also speaking in your forum. But being part of the family I'm sure that you will overlook my shortcomings.

I. Background of Building Knowledge Societies

. UNESCO's Work

In the major restructuring of this program, following the World Summit on the Information Society, UNESCO adopted a six year medium term strategy plan, one of the overarching objectives is building inclusive knowledge societies. And this was clearly based on UNESCO's advocacy throughout the World Summit on the Information Society, which was held in two phases: phase one was held in Geneva in 2003 and phase two was held in Tunis in 2005. And throughout the preparing processes, UNESCO continued to make the case, that the phenomena that we are witnessing today is not merely information society, but is knowledge societies in plural. Not knowledge society, but knowledge societies. As the discussions progress, there is more and more acceptance of the notion of knowledge societies, because the emphasis of information society is more on technology, on hardware, on connectivity and so on. While the UNESCO stresses more on the human dimensions of the knowledge societies, and because UNESCO has an attractive record of working with, modestly called partners, such as civil societies and organizations, NGOs in private sector, somehow, that advocacy works well for UNESCO and finally in the final declarations at Tunis. There was an acceptance that it is the phenomena that the world is witnessing today is one of knowledge societies. So, that is the background to what I might have something to say.

. Transform of society and Transformation power of technology

Now, as the world moved from the agriculture society to industrial society, and now, what we call we are entering knowledge societies. Actually, you find societies living even today many societies I come from —are poles apart. People in my village are certainly not part of industrial society even today. And

there are lots of people who are still living in the agriculture society. So, it is not as if the knowledge societies here exalt pervasive. Nonetheless, the significant part of the world population today is experiencing what I have called knowledge societies.

When we moved from agriculture society to industrial society, it was the machines that replaced the muscle power. The muscle power was multiplied by machine. So the machine was able to do a lot more than human beings could do. And as we move from the industrial society to knowledge societies, it is the information and communication technologies that multiply the brain power. That is what is happening frankly. That is the main difference between the industrial society and the knowledge societies. If you look at the historical development—the steam power from 1780s to 1840s, the railways from 1840s to 1890s, the electric power from 1890s to 1930s, and motor car from 1930s to 1980s—it is the advances in communication information technology after that. That is really now triggering what we called the knowledge societies.

II. UNESCO's Model of Knowledge Societies

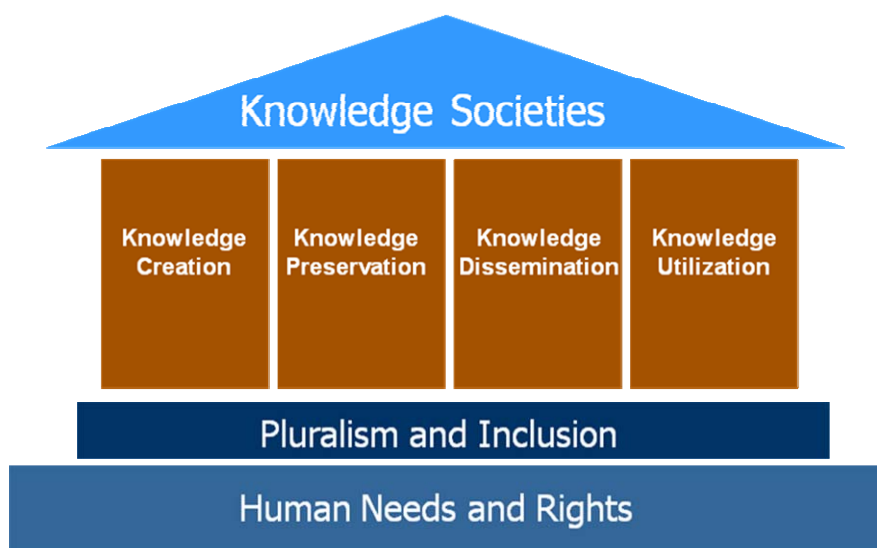


Figure 1 UNESCO's model of Knowledge Societies

And today, it is generally recognized that knowledge is a key factor of economic growth, social development, cultural enrichment and political empowerment of people. And nothing is more permanent long-lasting than empowering people living access to information and knowledge. Now, we believe that any vision of being knowledge societies must be based on at least two fundamental principles of pluralism and inclusion, because one of the threats that we face today which is also, by the way, manifested in the global economic crisis is homogenization. So, there is a need that, as we develop the vision for building knowledge societies that vision must be based on pluralism and inclusion, because if you leave out the very significant portion or percentage of the world population which is not part of the phenomena, then perhaps there would be not only insecure development but there would also be

a major threat to the world security.

The second, perhaps more fundamental, is that the vision of knowledge societies must be based on human needs and human rights. And we see that four major elements or pillars as you can see are shaped in UNESCO's house logo: knowledge creation, knowledge preservation, knowledge dissemination and knowledge sharing or knowledge utilization.

i. Knowledge creation

If you look at the contribution of information and communication technology, many of us or our students in universities will still remember punching cards to process the information and data. Our children today don't want to even memorize the tables and so on for they all work with the calculators. I'm sure that university has access to all kinds of guidance. But what is really happening is the people or some people argue that knowledge doubles itself every three years. Some people argue now it's two years. They also try to establish the linking between the part of the trip and doubling of knowledge and information. Whatever it is, I think it is safe to say that it is unprecedented today that the way the amount of knowledge and information being created in the world. The result of that is very rapid creation of knowledge, and also very rapid obsolescence of knowledge. Knowledge is becoming obsolete much more quickly, yet it has an implication on the work that we do as open and distance learners. It is also our responsibilities to update knowledge and skills.

ii. Knowledge preservation

Knowledge preservation is an important work for UNESCO because, somehow, people believe that knowledge that we are witnessing today was produced in somewhat 300, 500, and 600 or even a thousand years. That is not the case. The knowledge that we are benefiting from today was medicine, fundamental sciences or plans, sciences of knowledge that is applicable to life. Well, it was not developed in last 500 years but even a thousand years. It is accumulated knowledge centuries and therefore, it is important that knowledge that has been developed over centuries must be preserved. And fortunately again today, the information and communication technology is a great way of preserving that knowledge if you digitalize knowledge, for example, manuscripts for us. We have a program called memory of the world and documents that are of significance to humanity, which can be lost or be broken especially when there are natural disasters. But if you preserve that information in digital form, then you are not only able to preserve and pass it on to next generation, but you are able to move it, to make it mobile, make it useful for good of humanity.

iii. Knowledge dissemination

Knowledge dissemination is a challenge again, I don't need to believe of this point. This is precisely what we do as educators that from generation to generation: we share whatever knowledge that has been developed. That's

why many universities, especially the land grant university, agriculture universities in U.S. started the tradition of teaching research extension, a triangle interaction between the research that is done, which provides the information for teaching and the extension of the knowledge to the people at large.

iv. Knowledge utilization

At the start of sixties in my own country, India, there're many new agriculture universities, many agriculture research centres established, but only a very small fraction of knowledge that was being generated by those newly established studios was utilized by the farmers. So, it is not only important to create knowledge, to preserve that knowledge but also to share that knowledge so that knowledge can have an impact and people can benefit from that knowledge. So, these are the four pillars that are talked about and included in models of knowledge societies.

III. Description of Knowledge Societies

i. Knowledge societies: Basic features

Anyway, I think I have mentioned about the inclusiveness, plurality, equitability, openness and participation of people. Their knowledge and vision of knowledge society must have been based on these principles. Societal choices inform by democratic debate and consultation with all stakeholders and combination of human factors and technological forces. Technology by itself is not going to bring about positive result society unless it is shaped and governed and is based on certain phenomenon principles and the vision of building the society.

ii. Future of knowledge acquisition and sharing

Any future work that we do in the area of knowledge acquisition and sharing has to be based on openness we talked about in the area of content, standards, structures and interoperative systems so that the technologies can talk to each other. And for the long term of availabilities of this contents that we developed, there are also all kinds of new communities being formed and that is the processes of sharing knowledge and information that also being revolutionized when they especially look at the various new society and new media that allow social interaction today. The architecture of communication from one source to many people is now becoming from many to many. And that is really the process that is very recent. And we must take notice of that if you want to really benefit from it.

iii. Knowledge Societies: New social phenomena

When you look at the societies, of course, for the first time, I believe it was last year that more than 50 percent of the overall world population now lives in the urban areas. And of course, as a result of that, when a lot of people are displaced for the serious issue in this country, certainly the serious issue in my country, we talked about globalization with the human face harmonious development, inclusive development, no matter what you talked about, but that

realization is a problem of divide within societies. And especially, those who are moving from rural areas to urban areas, for them knowledge acquisition, updating of knowledge and still acquiring new knowledge and new skills is very very vital in order for them to survive in new environment. There's also rapid technological change. They also are faced with new structures, new organizations and new interaction in their environment. They also face the issue of cultural diversity because, when people from so many diverse backgrounds and cultures assemble together, it also creates a major problem of cultural and linguistic diversity. And of course, the globalization also has an impact on the climate change and therefore, there's also a need for the eco-literacy.

IV. Background and Challenges of Building Learning Cities

i. For the first time in history, more than half of its population, 3.3 billion people, will be living in urban areas. This will be, in fact, they are living in urban areas. By 2030, this is expected to swell to almost 5 billion. Let us imagine, urban population in Africa and Asia will double between 2000 and 2030. And by 2030, the towns and cities of the developing world will make up 81 percent of urban humanity. That's not surprisingly considering that India and China had long shared one third of humanity.

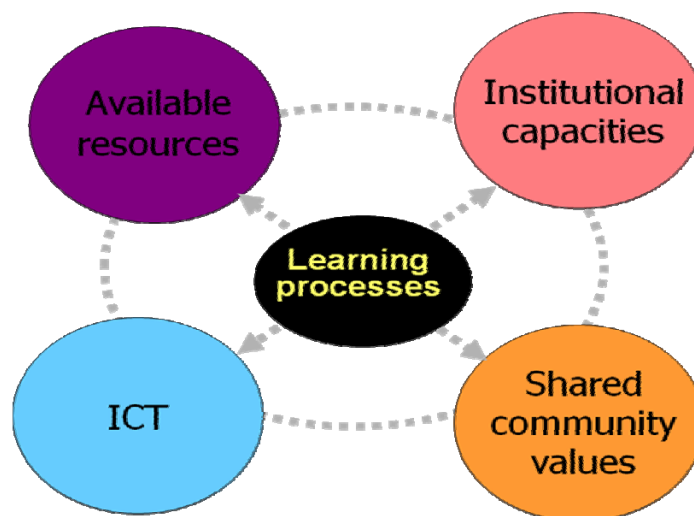


Figure 2 Learning processes in learning cities

. So, when you talk about learning cities, there has to be a consideration of the availability of resources, institutional capacities, shared community values and of course, I have to plug ICT. That's my bragger button, so I believe that ICT has something to create a learning process by facilitating interactions between these four companions.

. Main challenges of "learning cities"

Now, there are some challenges of building learning cities and ensuring good governance, participation, inclusion and empowerment, especially

because of the very skilled background of people, especially the new migrants to the cities. Addressing the good question, the pollution, transportation, energy, natural disasters, and crime, and I did mention a few years ago that I was visiting Shanghai and I went to visit the department of Informatization and I think if you will stay here for a few more days, please take time to visit this department. It does amazing work—how it has analyzed all the processes and has tried to use the information technology to solve things out for all of areas, in most of these areas around them. I don't define the new investors and creating or preparing people for new professions. That's where we are coming as distance educators or learners.

Well, I don't think this community really requires any liberation of this. We do address not the traditional learners who come to universities and colleges or schools only a period of time. Once the traditional learners who come to universities and colleges or schools only a period of time graduate, they'll have working life and then retirement life. I'm afraid that is changing rather rapidly. The sooner we recognize that, the more we are adding new variety of learners than those traditional learners, particularly, the ordinary citizens, and the people with disabilities. It is estimated that we have roughly 10 percent people with disabilities worldwide. How do you bring them to the full of "learning"? In this country, we have disabilities foundation, and in fact, it is very active. Also, in normal sociologist, the question is: how do you bring the benefit of information and communication technology to what is estimated roughly about 90 million people in this country and about the same number in my country. So, that is about 180 million in two countries in all. I just want to make the point that there're part of citizens undertaking the responsibility, and that they live a life with dignity.

Then, of course, my communication organizations, simply, I want to make the point that new category of learner, whose learning needs have to be addressed. This is nothing new if you are familiar with UNESCO's work in the area of learning to know, learning to do, learning to live together and learning to be. It has never been more important than in the context of learning cities frankly. Learning, especially, learning to live together is far more challenging when you pack millions of people crowded in the environment who come from different backgrounds, not only culturally, but also in some cases linguistically.

Well, this is again really nothing new for you. We need greater flexibility. We need cost-effective solutions. We need provision for greater linguistic and cultural diversity and there has to be a direct stronger link to income generation and learning. And that's why the area of learning that usual represent truly is and has to be the future in the field of education and learning. There's no question about that. But I keep saying that if it is the future and never present, then nobody will think of giving you the resources to do the office that we need to do today. And that's why I think it's the need today, not tomorrow.

V. New Methods of Building Knowledge Societies and Learning Cities

. Reengineering the role of traditional knowledge providers

Now, in new environment and invention you need to acquire leadership skills, tolerance, personal communication skills, participation and transparency because if you are living in a village environment, you live that village for centuries, tradition and family bounds that you are up rooted there. If you come to a new place, you have to acquire a new set of knowledge and skills, completely new set of values as well. Therefore, what is called soft skills? Soft skill is going to play much more vital role in learning in future. So, there is a need for reengineering the role of traditional knowledge providers. There is a need for reforming secondary and higher education what profound the statement to group like this, making better use of cultural organizations and their services, such as museums and galleries, the reviewing the role of research institutions with effective links to industries and innovative management and harnessing the role of libraries as knowledge brokers. Again, as UNESCO, we value the work of libraries as centers of knowledge, but there isn't utilization in the library, community museum or not as community. They have to play new roles and they have to use new tools in order really to serve as knowledge centers or knowledge semi-centers.

. New paradigm in education

I'm sure it should be obvious to us that there would be new kinds of knowledge that people need to acquire. But, we believe that education has to go through a new better time shift. But it's important to realize that it is moving from industrial to service, from supply-driven to demand-driven, from taught learning to flexible learning, from uniform provision to manifold providers, from institutions to networks, from knowledge transmission to personal learning, and from...I wouldn't say, I don't know how best the phrase of that, from formal to informal. I wouldn't say that formal learning is going to be outdated, but that informal learning will become progressively more important that I have no doubt about. So the future would reply bridging new and old learning, fostering network learning, boosting classroom effectiveness, augmenting lifelong learning opportunities, and expanding teaching competencies.

iii. Establishing new processes and building efficient structures

Now, come back again to those three formal areas that we have mentioned earlier. New processes, for example, the think tanks, the academia, the science sector, and the research on the industry, those are the elements in knowledge creation centers, in schools and universities of lifelong learning, in libraries and media. Just imagine today, that they are in study, indicate that our children are spending more time with media and information and communication technology than they are spending with their parents and schools. Now, if that is not going to have profound impact on their learning, psychology and behavior, I think we'd better recognize that today and that's why it's important for us to have media educational or media literacy for them and also information literacy that emphasis on how to analyze information and how to provide secure environment for the children from harmful contents, and,

then knowledge users. They are individual learners, communities, government, industry and business. And there has to be interaction and that's why when you talk about learning cities, you have the environment, you have the knowledge centers, you have media infrastructure and the schools and the universities and then you have concentrated population within the urban centers that can benefit from the interaction among the three.

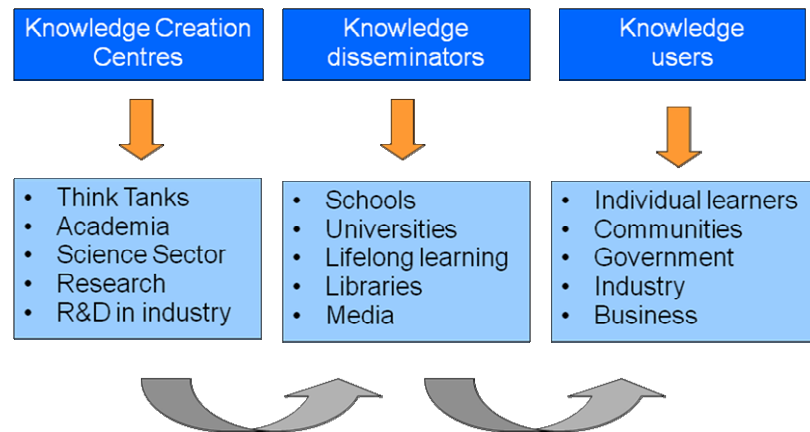


Figure 3 New processes and efficient structures

There are more efficient structures, competence centers, for example, networks and strategic alliances, lifelong learning centres and collaborative pilot activities. Last year we organized a what-was-called global knowledge park conference. I'm sure many countries' knowledge park must be a part of the learning city processes, and this is emerging as growth centres where you are able to provide very quickly and very effectively link between the centres that created knowledge and the means.

. ICT in Open and Distance Learning

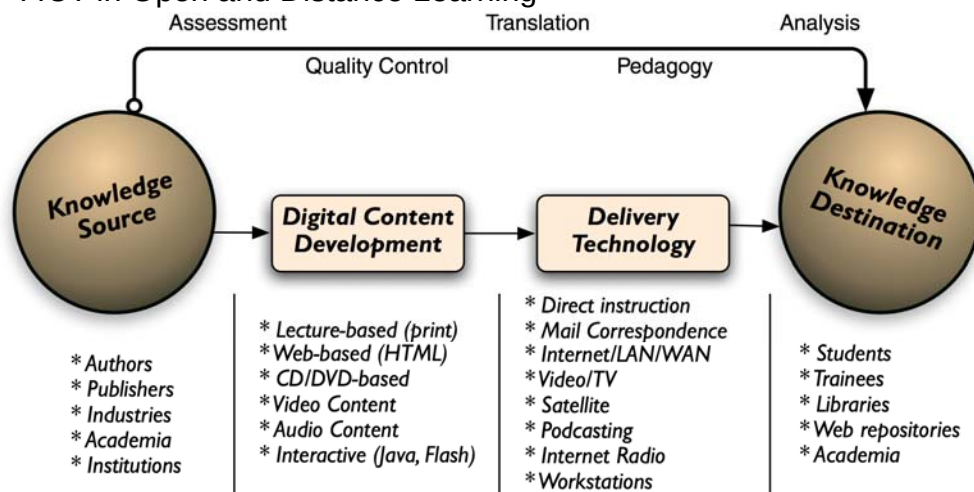


Figure 4 Open and distance learning process using ICT

Now, what can ICT do? Widen access, that's obvious. Improve quality. Such large number of learners have been flocking into open universities and distance learning centres simply because these centres provide liberal feeling and uniform quality education irrespective of people's geographical, social and

gender factors, improve effectiveness, offer personalized learning and reduce cost. I think all of these are true and I'm sure that expectations and advocates of open and distance learning are not something new. Figure 5 Development team based on ICT You have the companions unlike the traditional education. It is a team approach. It is industrial process. It involves the whole set of knowledge and skills to put together open and distance learning, including the source, the authors, publishers, industries, academia and institutions, digital content developers, technology digital experts and technology utilization in communities.

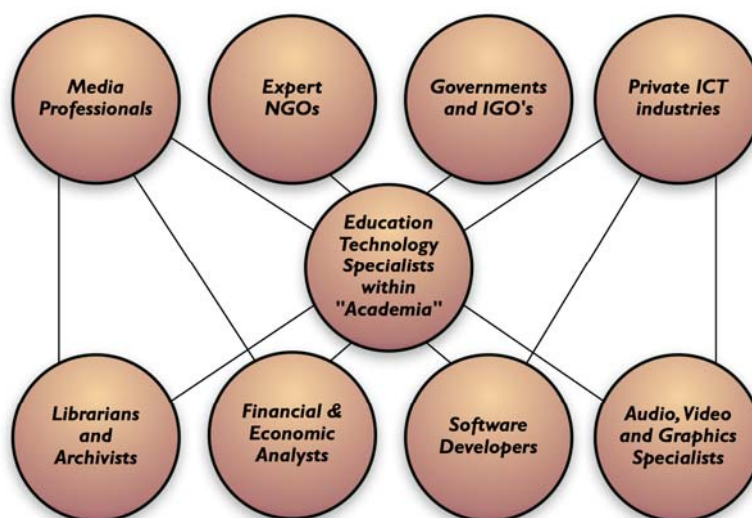


Figure 5 Development team based on ICT

Unlike usual teaching, the flexible learning and open and distance learning requires whole set of expertise that comes together. That's why it's almost like movie production, you have a commander, you have a script writer, you have an editor, you have structure designer. In other case the structural designer places such a vital role and that's why the product is really the wholesome product. It's the product that is developed for learning unlike the traditional system again where learning varies from one teacher to another teacher, from one classroom to another classroom, and certainly from one institution to another institution.

. UNESCO's role

Now, what is UNESCO? What UNESCO does in this area? Of course, it serves level tree of ideas. UNESCO is all of you here because we are greatest explorers of intellectual academia, researches and so on, thousands of people who work on various projects. But one that I would like to mention is the future of knowledge acquisition, which is sharing and I know that some people who participated in that even last year. It is very similar to one that you're talking about a short while ago about the Shanghai declaration. Perhaps it's similar to the Columbia Declaration and we'll be more than happy to share with you the ICT in particular. There's also declaration from knowledge parks conference that was held up this year in April. Then standards are setting, for example, the

new models of distance learning and ICT competences standards for teachers. It is an example in that area. Acting as a clearing house, we have for example, recently set up what is called open training platform, where we have got the material available from audio and in this season, other international or even indeed from national agencies and that is made available to anyone who wants to use it free of cost. My colleague has been meeting with the UNESCO chairs this year. We have a network called UNESCO chairs, or a network of UNESCO communication information chairs and this serves as a network for us to reflect on various issues relating to information communication technologies.

That's all, thank you, ladies and gentlemen, for your patience. It was a pleasure for me again to be with you and I look forward to participating in your establishment. Thank you!

(The above is a transcript of recorded keynote speech of 2008 Global Forum on Open and Distance Education at Shanghai TV University and not reviewed by the author.)