Towards global education: The need for the 21st century literacies

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Unesco World Conference of Higher Education in 2009 concluded, among other things, that "Higher education institutions, through their core functions (research, teaching and service to the community) carried out in the context of institutional autonomy and academic freedom, should increase their interdisciplinary focus and promote critical thinking and active citizenship" Furthermore, "International cooperation in higher education should be based on solidarity and mutual respect and the promotion of humanistic values and intercultural dialogue."

Educators have committed to these objectives clearly as observed by Elise Boulding already in 1988: "The objective is to create a peaceful, inter-dependent world which would be a good place for people to live. No one society can impose a universal order acceptable to all other societies. The creation of species identity that will encompass cultural diversity is a major challenge " (Boulding 1988)

However, the technology-push global thinking is dominated by economic technocracy and does not reflect enough the nature of multicultural world. One example of the current global innovation network of leading universities in the case of Nokia is given in appendix 1.

One way of approaching the problems of global university education is to construct a taxonomy or staircase of different tiers. Figure 1 below is constructed from the analysis of Edward Guiliano, President and CEO, New York University of Technology (2009):
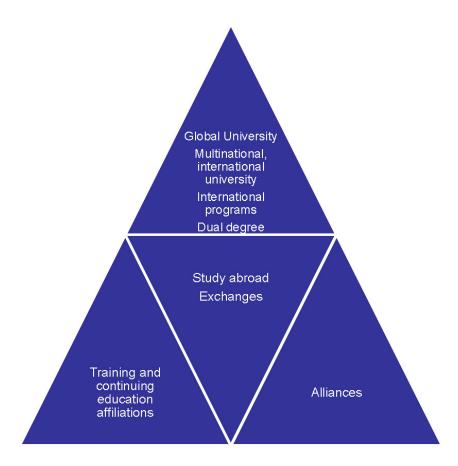
Figure 1. Toward a Taxonomy of Global Academic programs

In Guiliano´s approach the lowest tier is composed of non-credit-bearing affiliations including conferences, training programs, and extended education-type offerings. These are very close to friendship alliances which include co-operation agreements and memos of understanding for research and student as well as faculty exchanges.

The next levels would be composed of studies abroad and exchanger programs. These programs mean studying or living abroad with another faculty of the same university in another country. In general, full degrees cannot be earned at these sites, but courses and study at them fulfill requirements for degrees at the home campus. Dual degree programs leverage strengths of each university and campus. Students study both curricula and attend at both locations. Another type of international programs is a degree or credit-bearing certificate programs for foreigners.
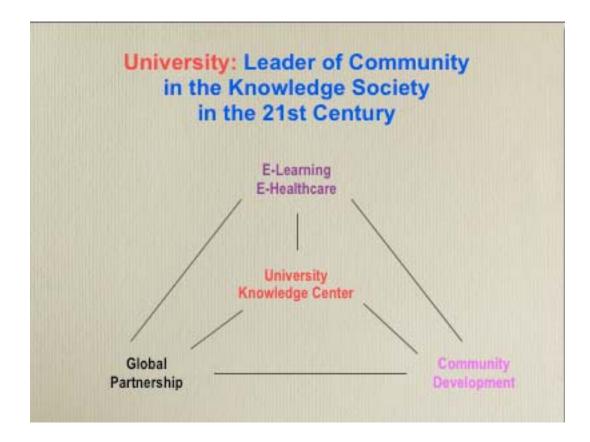
A multinational university or international university means degree-granting branch campuses, generally staffed by faculty not affiliated with home campus, autonomous or semi-autonomous administration and governance extending to the curriculum. Degrees carries name of home institution but usually with a separate designation.

The highest level in Guiliano´s tiers is global university. For him this means one degree, one curriculum offered by a university at one or more global locations, characteristics include exchange of faculty and students, and virtual or distance-learning classrooms. This New York Institute of technology model includes "some degree of practical ´glocalization´, but a true outward-looking global university with one set of standards and outcomes worldwide, one

administration, and where students, faculty and ideas freely flow without borders, evolving global understandings and new ´globalized´ content over time" (Guiliano 2009).

In a way this approach is very close to our own model of Global University System (GUS) which we have developed in the Unesco Chair in Global e-learning at the University of Tampere, Finland. The Global University System (GUS) [Utsumi, et al, 2003] is a free (volunteer-based, multi-sponsored) grass-roots initiative to widen access to higher education and vocational education and training, and to help participating institutions to meet local needs in ways that are locally-appropriate and globally-informed. The GUS encourages the integration of untapped or poorly-deployed human and technical resources, particularly to facilitate the diffusion worldwide of low-cost means of access to the communication and education resources that the privileged West takes for granted. Since it began in 1999, the GUS has become global. It works in the major regions of the globe with partnerships of higher education and healthcare institutions.

Figure 2. The Mission of the Global University System (GUS)

This project has been modeled very much with the inspiration of the best traditions of American thinking: We have believed that the culture of America is particularly suited for the creative mind because it has emphasized:

- Extreme freedom of thought,
- An emphasis on independent thinking,
- A steady immigration of new minds,

- A risk-taking culture with no stigma attached to trying and failing,
- A non-corrupt bureaucracy, and
- Financial markets and a venture capital system that are unrivaled at taking new ideas and turning them into global products.

The process of globalization and has brought our attention to the complexities of the multicultural world and challenges of the true nature of the emerging global knowledge society. The Unesco study "Towards Knowledge Societies" (2005) revealed that there is a general agreement on the expression "knowledge societies" but not of the content of it. We can ask; are we endorsing the hegemony of the techno-scientific model in defining legitimate and productive knowledge? Should the term "Digital Age" be replaced by multicultural world? How do we promote the spirit of knowledge sharing and caring and nmew humanism?

These were some of the concerns for me to work with professor Jose Manuel Perez Tornero, Autonomous University of Barcelona, for the Unesco Institute for Information technologies in education (IITE) for the publication "Media literacy and new humanism" (2010). We understand *civilisation* as meaning a specific state of *technical development* which corresponds to a precise evolution in the *manmade environment* in which humanity operates, and which is supported by a given set of knowledge, codes, languages, skills and intellectual capacities related precisely to this manmade environment. These intellectual capacities are known in their broad sense by the name of *culture*, and we shall call the shift from one state of civilisation to another *evolution in the civilising process*.

In our view the threshold of the 21st century based on these concepts, can be described as.:

a) A *technological civilisation* based on the digitalisation of information;
b) A *media culture* organised around the media and their convergence; and that it is subjected to
c) A breakneck process of civilising evolution that is only gaining momentum.

The key to this state of affairs must be sought in the fact that during the last few years of the 20th century and early years of the 21st century, digital technologies and the new media (ICT) have come to occupy the epicentre of our lives. They are thus a key factor in this specific civilising stage.

They are responsible for having constructed the *hypertechnological manmade environment* in which almost all people and objects have been endowed with a kind of *digital interface,* so we work, live and interact in a digitally enriched environment, in a kind of digital bubble.

In brief, we can identify some global trends in technology and education. First of all, the world is becoming increasingly multicultural. There is a general confusion of the essence of universalism and uniqueness in the multicultural world. Globalism has brought such quantitities as technics, markets, tourism, and information but universalism deals with values like human rights, liberties, culture, and democracy. Each culture and language is unique. Globalism tends to dominate over the awareness of human values.

In my understanding we face three kinds of problems. First we have to try to understand what is the learning process of becoming literate and what does communication competence and media skills mean in the information society. Second, we have to analyze the increasing neo-illiteracy. Third, we should discuss of what kind of skills and competences should people have in order to become active citizens now as compared to the earlier skills of writing and reading.

In an intercultural world communication necessarily mediates different values and cultural behaviors. Great civilizations and cultures have very different patterns of communication and use different senses in a different way. In consequence, if a truly global information society is to be created, more attention should be given to the diversity of cultures and the co-existence of different civilizations and cultures. For the development of our own language it is necessary to rethink the whole education system, from primary to higher, and understand the links to multiliteracies, multimodality and multimediality"

The study of complexity has brought science closer than ever to art. Knowledge has gone through a cycle from non-specialism to specialism and is now moving back to interdisciplinarity, even transdisciplinarity. Art deals with the sensual world (media as the extension of senses) and the holistic concept of human being. Traditional knowledge has been disciplinary based although increasingly interdisciplinary. In the vocational field, knowledge is also contextual and needs to be created in application – learning by doing. This also reflects local and regional realities. The Western philosophy is characterized by analytical, scientific, objective, rational, and critical thinking while the Eastern approach is characterized by synthesis, literature and art with a subjective and emotional thinking. Both cannot and should not dominate the other, but should have close dialogues between them. In a sense, many of the basic issues were already discussed in ancient Greece by Socrates, Plato, and Aristotle.

Aristotle´s Poetics is of particular importance to understand the balance between different senses of the human being and the combination of sound, drama, and text like in modern multimedia. Also Aristotle´s definition of rhetoric as the faculty of discovering in any given case the available means of persuasion is a relevant approach to analyze the influence of modern media.

In order to learn new technologies and become digitally literate, new forms of learning paths have to be developed utilizing all forms of learning, especially at work and nonformal environments. At the same time, special attention should be given to teacher education in ICT skills and competencies. The period of transition in which we are now living differs from the periods of change of older dominant media. Traditional print and electronic media were introduced within a period of reasonable length, and when we moved to the active use of a new form of communication, we could also have a rough estimation of the economic and social impacts of this transition and train new professionals for the media and support people for the institutions. Now different forms of communication and technologies integrate and converge with a speed that hardly anyone has the time or ability to assess all of the consequences, real possibilities, or problems.

The use of ICT and digital skills in performing art, craft, and other fields require a team work with special skills. The trend of digitalization does not mean that everything traditional should be rejected. New communicative inventions have always also destroyed something valuable, and special attention should be given to the diversity of approaches in the ICT

applications. A blended approach is often adopted. Most essential in this new learning environment is the fact that the learner is constantly facing epistemic conflicts when a problem is presented that needs to be solved but lies outside the learner's current repertoire. Most of the problems of the information society will be of that kind. The learner needs to proceed with self-regulation with an active engagement, which is the learner's response to the conflict. The idea is to adjust and reconstruct thinking to deal with the learning problem at hand.

The cultural dimension in the ICT applications also brings the dimension of feelings and the spirit of sharing and caring to the process. The social dimension requires inclusive policies. In an intercultural world communication necessarily mediates different values and cultural behaviors. Great civilizations and cultures have very different patterns of communication and use different senses in a different way. In consequence, if a truly global information society is to be created, more attention should be given to the diversity of cultures and the co-existence of different civilizations and cultures

People of the work force face two overlapping challenges. The first is to acquire the skills necessary to enter an increasingly digital job market, and the second is to continually improve those skills, and learn new ones, as life-long learning. Many studies suggest that workers around the world may not be keeping pace. It is widely believed that schools are failing to sustain the pipeline of employees who are adequately prepared to exploit new knowledge and skills.

The first skill in the working life is to define the information problem. It is not possible to look back for an answer from earlier practice since such does not exist. This is followed by identifying information needed in order to complete the task to solve the information problem. There is a wide consensus that all workers should be able to:

- *master appropriate tools to gather information*
- *understand the context of that information*
- *actively shape and distribute information in ways that make it understandable and useful, and*
- *exchange ideas, opinions, questions and experiences.*

People have always learned at work. According to Mr. Mikko Salminen, Nokia Learning Centre Network of Nokia Corporation, the paradigm of learning at corporate setting is rapidly shifting from skills development to capability management. The strong drivers behind the change are the ever increasing need for faster innovation cycles and the ability to support the strategic competency renewal (Salminen 2005).

The new learning paradigm can be expressed as the 70-20-10 formula of learning:

- *70% of the capability is built through on-the-job development and real life experiences*
- *20% is built through coaching, assessments and increased self-awareness*
- *10% is acquired through structured learning deliveries such as instructor-led-trainings and eLearning*

The learner will soon realize that by adapting this formula he/she will make each day a learning day. The need to separately plan the time for learning and work disappears and learning becomes work as usual.

However, this does not mean that we will invest less in learning and development, says Salminen. Basically, the formula is about developing the right mindset for learning rather than making choices between learning events and modes of delivery. There will always be room for skills based competency development, and certain enabling skills will continue to be delivered in a classroom, not to mention highly interactive leadership development where discussions and networking play a major role. In a similar fashion, eLearning is here to stay as an easily scalable and cost efficient delivery channel for theoretical solutions.

As the new working culture emphasizes the importance of lifelong learning, corporations are beginning to provide workers with the means to customize and direct their own learning experiences. There are still several steps to be taken to improve employment opportunities for individuals and expand the innovative capabilities of companies. Everybody in working life and training is becoming more responsible for ensuring the development of the knowledge and skills acquired.

Jose Manuel Perez Tornero and myself identified five important dimensions of the new humanism that in comparisons to the old humanism of the renaissance need to be developed now in the 21st century. If the global communication society has come hand in hand with disproportionate promises and unfulfilled utopias, today it is compulsory to examine and evaluate why this has transpired. It is now imperative to abandon *blind trust* in technology and to deepen our critical spirit. We need to develop an aware attitude that is capable of weighing the positive and negative effects of the changes, and one especially that is able to inspire new technical developments that jibe with human beings' aspirations.

To accomplish this, we must first dissolve the *axiom of spontaneous technological progress* and accept the fact that when technological alternatives are chosen, progress is only one option among many. The positive development of the media technologies will depend on our ability to take the right decisions and gain cognizance of their potential impact. The global communication society harbours enormous potential, along with some risks. However, its full, positive realisation depends on whether humanity, including each and every one of us, gains in awareness and responsibility.

From our standpoint, today this *awareness* must be *media-related* and *humanistic.* On the one hand, as media-related, its main goal must be to monitor the development of the media and be keenly aware of what it may represent for humanity, for better or for worse. On the other hand, this awareness must drive the values of a new humanism, and it must do so in many senses:

a) In the sense that it must situate *the human person at the core of this media civilisation,* this new manmade, telecom world around us, just as in the Renaissance the humanists managed to place human beings at the centre of a world which had been organised by theology until then.

b) In the sense that this new awareness must drive *the primacy of the critical sense towards technology* and thus replace this *trusting* and rather unselective attitude that

prevails today and forces us to unconditionally accept technological innovation. This echoes how the humanists defended a free, critical interpretation of the classical texts and ultimately the autonomy of the intellect and the human person. While Renaissance humanism served as a critical filter of the values of its day by filtering mediaeval culture with classical culture, the new 21st century humanism most foster a critical sense which is alert to the hypertechnologised environment and capable of discerning between what should be kept and what should be revamped.

c) In the sense that while Renaissance humanism helped to "discover" the sense of self and biography and fostered a new form of individual autonomy compared to the sometimes asphyxiating weight of traditionalist thinking, the *new humanism must help to foster a sense of autonomy in a context in which global communication* can engender dependence and very subtle forms of intellectual subjugation.

d) In the sense that while Renaissance humanism was characterised by a "discovery" of new "worlds", America first and foremost, but also Africa and Asia, giving rise to an "encounter" – often violent – between cultures and civilisations, the *new humanism in the global communication society must prioritise a new sense of respect for multiplicity and cultural diversity and* must support media development with the goal of consolidating the new culture of peace.

e) Finally, in the sense that, just like Renaissance humanism, through the new media and humanistic awareness now is the time for us to be capable of *reviving the classical idea of cosmopolitan, universal citizen, with very clear rights and responsibilities,* which entail a planet-wide commitment. We must foster a kind of citizenship that stimulates the idea that individuals view themselves as the bearers of universal rights, as well as responsibilities which are also universal.

Today, *media awareness* and the *new humanism* are inseparable. They are the obligatory response to the formation of a *technological civilisation* and a media culture.

In order to learn new technologies and become digitally literate new forms of learning paths have to be developed utilizing all forms of learning, especially at work and non-formal environments. At the same time special attention should be given to teacher education in information and communication skills and competences. The period of transition that we are now living differs from the periods of change of older dominant media. Traditional print and electronic media were introduced within a period of reasonable length and when we moved to the active use of a new form of communication, we could also have a rough estimation of the economic and social impacts of it, and train new professionals for the media and support people for the institutions. Now different forms of communication and technologies integrate and converge with a speed that hardly anyone has the time or ability to assess all of the consequences, real possibilities, or problems. In a positive sense, people may be able to speak more directly to each other without former restrictions.

The cultural dimension in the communication and technology applications bring also the dimension of emotions and affection and the spirit of sharing and caring to the process. The social dimension require inclusive policies. Internet does not automatically promote social understanding and integration. In an intercultural world communication necessarily mediates different values and cultural behaviours. Great civilizations and cultures have very different

patterns of communication and use different senses in a different way. In consequence, if a truly global information society is to be created, more attention should be given to the diversity of cultures and the co-existence of different civilizations and cultures.

Perez Tornero and myself think that no matter how disperse and diverse it has been, the international media literacy movement has always shared the idea – formulated more or less explicitly – that it was necessary to reach a new *media awareness.* This *media awareness* would help us to achieve two key goals: a) *ascertain the importance and influence of the media system* in our everyday life, and b) *develop the competences needed* to use the communication technologies bearing human goals and values in mind.

The different aspects of media literacy are related to other fields, such as:

a) *critical thinking* and an improvement of the capacities of selecting and processing information;
b) the *problem-solving capacity*;
c) improvements in expressive, communicative and interactive capacities;
d) *civic participation* and active citizenship.

Today media literacy is one of the major objectives of educational and communication policies, and at the same time the attaining this media literacy is currently a crucial condition for the development of free, democratic societies.

Today, knowledge and skills for international and intercultural interaction are needed in nearly all fields. This is why multicultural studies should be made an integral part not only of general education but also of adult and vocational education and training. It is essential to consolidate global education in the curricula, teaching and operational cultures of schools and vocational institutes. Instruction must offer tools for finding out the causes and effects of different phenomena and for drawing conclusions, which at its best leads to growth into active, critical and mediacritical world citizens.

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Appendix 1. The open Innovation network of NOKIA

Nokian avoimen innovaatiotoiminnan verkosto

Laaja, avoin ja aktiivinen yhteistyö valittujen kärkialoillaan maailmanlaajuisesti johtavien yliopistojen kanssa.