The UNESCO Chair in Education & Technology for Social Change

The UNESCO Chair in Education and Technology for Social Change at UOC has designed a line of work intended to study the different relationships between the elements of the so-called *iron triangle* of online education: access, cost and quality. As a matter of fact, one of the most relevant topics of the current debate is democratizing the access to higher education, in order to facilitate and improve the opportunities of access at the lowest cost.

The models, formats and mechanisms to facilitate access opportunities to the greatest number of individuals are increasing in number, and meanwhile, taking special care of those who belong to the least privileged collectives. The current situation of the world economy produces a trend to study solutions that guarantee the maximum access at the lowest cost, without sometimes, sufficiently analysing the lessons coming from the economics of education. The collateral effects that this can cause in the quality of the offer, thus, are not being analysed adequately. Online education should be framed in this perspective, as it can provide solutions for both societal and educational needs.

The Chair's work and initiatives take as reference the document "*Transforming our world: the 2030 Agenda for Sustainable Development*" (United Nations, 2015) which underlines the commitment and the challenges to face world-wide for a sustainable and equitable development. In order to do so, a common effort coming from both the public and the private sector is needed. Specifically, the Chair focuses on the Goal 4 of the Sustainable Development Goals (SDGs) which aims to ensure, by 2030, "that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development" (SDG 4.7).

This means that education is one of the main tools for achieving a sustainable development (OECD, 2007; UNESCO, 2014) and that those countries with more educated people have generally better economic incomes and more opportunities to grow and increase the wellbeing of their citizens. In addition, technology is also providing new opportunities for access to higher education, as well as the transition to new methodologies that might help to get better teaching and better learning outcomes. But technology might also bring us inequality and undesired effects. Online teaching and learning is one of the ways in which technology can be applied to education.

This UNESCO Chair is highly committed to identify, analyse and disseminate any evidence or data regarding the social impact and the economic effects of online education. It is also engaged to launch the dialogue between the social and the economic -both important aspects of any educational policy - to explore the opportunities of collaboration between the public and the private sector in the development of policies towards the achievement of the Sustainable Development Goals (SGD).

The Seminar on "Economic Effects and Social Impact of Online Education"

The UNESCO Chair is organizing a long-standing Seminar on the "Economic Effects and Social Impact of Online Education", which aims to analyse how online education can be a driver for having a more equitable higher education. Eventually, the seminar seeks also to study possible contributions of online higher education to social development and the economic effects it produces in the contexts of activity, giving greater dissemination and understanding of how online education can be an ally for sustainability and development.

By inviting experts and professionals providing specific insights on a certain aspect of research, the UNESCO Chair looks for new solutions and answers, seeking to strengthen the general impact of education-based initiatives. In addition, it suggests taking a cross-sectional approach to consider the economic, social and environmental dimensions of any sustainable development, and providing new approaches for further research on these topics.

The seminar is organized around different dedicated workshops, two of which have already been held, one focused in a case study of alternative economic models for an equitable higher education, and other on identifying the elements going beyond the access to online higher education: the expectations and learning experiences of the students and the capacity-building skills for development that are recognized to be achieved through online education.

The third one is aiming to deepen into the economic aspects and outcomes of online education, the management models which better provide for an affordable and sustainable way leading to equity, and the role the private capital might play in the current and future scenarios, its benefits and disadvantages.

All these workshops host a panel of experts, as well as keynote speakers, coming from diverse areas, helping to build a framework from which indicators and other qualitative evidence of socio-economic impact of online education might be considered.

It is the intention of this UNESCO Chair to summarize the most important ideas and contributions in several Discussion Papers which will be published on the Chair's website to be shared with the community. These Discussion Papers aim to be the result of the joint reflection in the Workshops and they are going to be permanently revised. In addition, they will suggest recommendations to the community and the diverse stakeholders, and new topics to be studied further.

Seminar on "Economic Effects and Social Impact of Online Education"

Discussion Paper #1: "Going beyond access: exploring the social impact of online education"

According to data from UN, higher education participation will globally move from around 250 million to 460 million by 2030 and always more individuals look toward online education as the driver to widen access. The easiness to access, jointly with the increase of flexibility and its lower costs, seems to be interesting long-term solution. It would probably result in a knock-on effect through increasing the possibilities of obtaining a greater quality of life for those involved, as well as contributing to the socio-economic development of their own countries. But is the guarantee of access enough? Is going through door far enough to consider success will be waiting for you on the other side? Several experiences show that access *per se* is not enough and does not guarantee the achievement of a positive learning experience.

This Discussion Paper aims, hence, to state the situation on the basis of the discussions held along the seminar to find out and understand what is beyond access, which is one of the main characteristics of the e-learning, focusing on the concept of *getting people in, through and out the door*.

In this sense, the paper tries to summarize the discussions held in the Workshop, which were based on the following kick-off questions: Which is the mission of education? Which are and might be the social effects of online education? What do students get from online education and which are their expectations? Which kind of impact online education has on their lives and their social environment? How to prepare people to enter the labour market through building students capabilities and society's capacity? Which are the main contributions of online education and in which way it can participate in the changes of our changing society?

The arguments and counter-arguments of these aspects will be deployed in order to provide a general perspective on the topic, leading to further debates. These questions constitute also the basis for approaching the following workshop on the economic effects of online education.

It is important to state that we consider online education and e-learning as very similar terms. We do that because we understand e-learning as something more than just delivering content.

Online education is a way for delivering teaching for learning and learning as a result of it and of the work students carry out by their own under the guidance of teachers. Other ways of informal learning will probably add some value to the process, but they won't be central.

Higher Education: for what

The current education context is subjected to important pressures coming from both the cost of education and the will to open it to all the social segments and at all the education levels. As several studies suggest, countries with a high number of well-educated people have a higher per-capita income. However, in many cases the increase of this income through education is not simple, as for the lack of sufficient public funds or simply because it is not targeted as priority of the national policies agenda. Universities are also facing a sustainability crisis concerning their resources, which might challenge the education of future generations: they have to keep their quality high while assuming a mass education provision. This situation makes some social and economic agents to think that perhaps there is a need for re-shaping higher education in a different way, to make it more able to match with the societal demands.

In this sense, some criticize the current higher education system as a rigid education structure that is not coping with the changing reality, characterized by high youth unemployment rate, increasing poverty and social inequality on the one hand, and new technologies, innovation and information open sources on the other hand. Herein, standard higher education does not serve anymore as social elevator.

On the other hand, education is considered a fundamental human right with indivisible benefits, that is to say it is inclusive and for everyone. It has a primary role in the life of the individual as it is indispensable for the exercise of the other human rights and because it allows people to lift out of poverty and actively participate in their own community.

The UNESCO deploys the concept of transformative development in its policy document on *Education post-2015*, stating that the education system has to study which methods should be used to provide citizens a learning experience, which let them achieve the necessary capacities to face the present challenges and to train responsible and committed members of the society (UNESCO, 2015). Whilst, the OECD, in several of its publications considers that the mission of higher education is just to help students to get a job and to provide them with those skills and competences expected by the companies.

These two dominant visions lead to two different socio-economic assumptions. On the one hand, the perception of higher and lifelong education as a catalyst to help people in a more affordable way to build their professional careers and being able to respond to the demands of the employers. On the other hand, some others argue that higher and lifelong education has not the unique goal of serving the companies' needs, but instead the personal development of every individual.

This aspect (the real learning experience of the students) must be taken into high consideration when dealing with the achievement expectations of specific skills and competences besides the classical students' preparation to the workplace incorporation. To know what does "going beyond access" for the students is crucial to understand the whole complexity of this process.

As it has been said, in the next few decades an increasing prospective number of people with different backgrounds and curricula will access higher education. With the current global trends and within the framework of the SDGs, would it be possible to couple the democratization process of access to quality higher education and the changing labour market?

Again, some visions state that education might be conceived in short-term perspective and oriented to what companies want and require. University must be as closest as possible to the

demanding business world, but it has to dictate its own way to release contents, in order to avoid companies to take control of them. This assumption is based on the fact that there is a kind of theoretical learning and transversal competences –and maybe some common high values- that only university can provide for.

From the market perspective, the industry insists on the width of the existing gap between the offer provided by higher education and the labour market, still big, despite the evolution of online education. Moreover, the incoherence in the education policies does not allow the match of "over-educated" profiles with the shrinking competence-based approach of the SME's. This allows once again to debate about the competences-driven mind-set of companies and the importance universities give to the personal characteristics of the student that could lead him/her to a successful professional and personal outcome.

This discrepancy is visible at the policy and academic level when dealing with the question about the real mission of higher education. It is clear that the meaning and mission of higher education is strongly related to philosophical and ideological assumptions, so the way the interpretation of the present problems and the way they might be conducted and solved in the future will be conditioned for these ideological approaches.

Historically, distance education has been committed to provide a wide range of opportunities to foster social and economic change, leading to increase equity. With the arrival of online education, many traditional distance teaching universities, brand new online universities and some campus-based institutions have assumed their role as political actors (Tait, 2013) in the field of human development in search of equity and quality. At the same time, new private, corporate-based educational providers got and are still getting into the arena of online education, as they see it as a business opportunity. The social approach of these initiatives is still uncertain.

Online education as an enabler for capacity development

The core idea of the sustainability from the UN could be promoted and reproduced until reaching what stated by the SDG 4, that is to say, ensure an inclusive, equitable and quality education for everyone and promote the lifelong learning model. This is the current big challenge, and since the current model of education cannot answer to the 460 million people who will have access to higher education by 2030, online education seems an interesting aspect to take into consideration.

The rising demand in higher education leads professionals and experts on the urgency to the re-think it on mass terms, as previously stated, focusing on the kind of deployed knowledge, in which way the contents are spread to give students the right competences they need to enter in the labour market or for their personal development. When thinking about mass education, some voices support the importance to emphasize the concept of quality. Quality is a multidimensional and sometimes fuzzy concept. It will be usually differently understood by the different stakeholders in the higher education arena. Although it is relative to definitions, it cannot be dismissed when developing new educational models. Taking some of the educational system off may not be a good solution for keeping the mission of higher education in. A precise analysis of the effects of modifying the different roles of the different player of the system (teachers, content, assessment…) has to be carried out. A quality model in which only the economic outcomes of the education system would be considered as the central issue, would not probably provide the people's development that higher education pursues.

Initial findings from a study conducted by PSU and UOC (Sangrà & Qayyum, 2016), show that students most positively value the contents that allowed them to:

- deepen the knowledge acquired and being able to apply it
- develop critical-analytical thinking
- competitiveness
- personal competences that can be deployed in professional life (methodology, time management, autonomy, problem-solving and conflict-resolution, organization management)
- personal growth

These skills can be compared with those identified by the literature and that according to the academia would measure the impact of online education on the individual and the society. Some of them are listed below (Wilson-Strydom, 2015):

- Practical reason: make well-reasoned, informed, critical, independent and reflective choices about post-school study and career options.
- Knowledge and imagination: use critical thinking and imagination to identify and comprehend multiple perspectives.
- Learning disposition: have curiosity and a desire for learning. Having confidence in one's ability to learn.
- Social relations and social networks: work with others to solve problems or tasks. Be able to form networks
- Respect, dignity and recognition: respect others and oneself. Valuing others and human diversity.
- Emotional health: Not being subject to anxiety or fear which diminishes learning.
- Language competence and confidence: able to understand, read, write and speak confidently in the language of instruction.

All they are very important to consider when we look for the social contribution of online education. We have to focus not only on what we teach, but also how we teach it and what does it mean for students. Some studies (Bakia *et al.,* 2012; Hiltz, 2008) have aimed to measure the social impact of online education. The outcomes of these studies have showed interesting aspects related to the students' expectations. This is just a starting point, but a very promising one.

There are experts that suggest reflecting whether the aim for many students could be not to complete a program, but rather having achieved the skills and specific competences required to access in the labour market. In most of the seminal studies on this issue, the real learning experience of the students has not been deeply analysed, so further research on this is needed.

The impact of online higher education in the students' lives their social environment

Currently, there are many modalities of what we call "online education", "online learning" or "E-learning". The different approaches usually come from different backgrounds (technical, pedagogical, economic). So, it means that the meaning will be different when approaching from their different perspectives.

In general, people are used to think in online education as a cheaper one, easy to implement and to conduct. Usually, as well, this thought comes from particular approaches or from a lack of knowledge about what online education might really be.

One of the ways people understand online education –even if this is a very small part of it- is MOOCs (Massive Open Online Courses), for some the solution for the access issue and for providing multidisciplinary knowledge for free and at an enormous scale. In fact, MOOCs providers have been reinventing the old experience of having access to learning resources in libraries –currently, adding videos as well- in the shortest time possible, reaching a wider target and cutting down costs related to learning management and staff. But this only refers to access. Most of the other issues related to the effectiveness of higher education will remain unsolved.

On the other hand, MOOCs show low completion and high drop-out rates, which is a relevant aspect to account for a better understanding and analysis of the social outcomes.

This structural issue can be somehow solved if universities, which are organizations that produce and sell knowledge, as public good, take their responsibility as social actor (Tait, 2013) to manage the near and long-term transition lead by the digital revolution. In this way, students' personal characteristics could be improved and their competences acquired through the knowledge put to the service of the transitioning job demand in a fruitful and innovative way. Herein, the knowledge is a key aspect, since it can be considered as a spill-over and an experience good. If university does not get back its social value, the students' competences will be marked only by companies.

Another concept to take into account to measure the impact of higher education is employability. Despite this indicator has not been proved for online education, according to some experts, it might not be the main concern of universities, as we do not know how the future labour market and job demand will be. Whilst, the OECD supports the need to integrate working competences in education, the World Economic Forum states that there will not be any fix job along the course of life, hence, universities have to adapt to the liquid society and seek to train students for their Curriculum for life. This basically means promoting a kind of education that take into consideration the personal and social development to better adapt to specific and diverse personal and working contexts. Thus, to make the curriculum of life applicable, it would be important to value the usefulness of the contents and not the contents *per se*.

The idea of curriculum for life to reformulate or re-plan the content of education is highly positive, but universities do not seem to be following this path. The issue herein is at the basis: the education value is perceived from both the student and the society, whilst its benefits are visible only when the student has finished consuming the educational product. Indeed, education has always had a long-term indirect effect, which is not directly measurable in the short-term period. This misleading aspect, linked to its fixed structure and its content management, has unfortunately increased critique towards university and higher education for being too theoretical and its knowledge not directly applicable to the business world.

In this perspective, some experts argue about the kind of changes does the digital revolution foresee and how the education system is encountering them. Pushed by the market, universities are incentivizing the education for purpose approach, focused on specific ready-to-be-used knowledge, whilst what we need the most is a wider one, leading to the adaptability to the changes.

Online education as a means for balancing the approaches

Some stakeholders wonder if online education could really help to fill this gap, if traditional education could not.

Some answers could come from the studies done on the effects and/or impacts of ICTs in the productivity of small firms (Díaz, Sainz & Torrent, 2015). No direct effects have been showed, but the indirect ones exist. The usage of technology complements with other valuable elements of the enterprise like innovation, training or organization and produces the so called spill-over effects. The majority of studies which look for an immediate and direct effect have a wrong methodology. Whilst, the e-learning has methodologies of impact similar to those applied in the ITCs at the macro-economic level, which look for the indirect effects. This is apparently one of the right paths to meet positive aspects of e-learning for economics and society.

But some others could come from the above mentioned study still in progress conducted by PSU-UOC. In this study, some interesting points can be highlighted:

There are no technological or administrative barriers to keep studying or access, whilst the financial barrier is still an important economic aspect. The study suggests that one possible solution planned could be the insertion of micro-scholarships with a fundraising campaign.

The targeted sample thinks that online education has a higher social impact instead of economic in their community because it allows a good combination with their working life (part-time students), their social life (participation in the community) and their family duties. Whilst, the economic impact is quite moderate, related mainly with the costs of education (tuition fees and living costs).

When talking about whether online education has an impact, a comparison between the different education supply models is fundamental, especially in terms of costs of the education product.

These highlights show that introducing the concept of higher costs, quality and wider access into discussions of open, distance, and e-learning immediately creates tension as far as social justice is concerned.

Within this complex reality, it is almost logical that some would like to argue on how online education can fill the gap between what the labour market asks and what the education system provides. When dealing with conducting a segmented research in terms of employability promotion or direct impact on higher wages or taxes, online education is just at the beginning of filling this gap. Identifying the indicators to prove the importance of education at the socio-economic level is fundamental, as people must understand that it is a payback in both personal and professional life and there are still several sectors stating that education does not worth it.

The fact is that online education may help to improve higher education through making access easier, promoting the enhancement of teaching and learning and keeping quality higher by using the most appropriate technologies, but it will not be the panacea for any kind of problem education is facing and will do further.

Remarks and thoughts for further discussion

All the arguments and counter-arguments approached during this workshop have opened a new perspective on the possible scenarios of online education bringing in further questions and debates.

One of these scenarios is the so-called networked collaborative economy. This scenario was developed within social networks and apps that put in contact people out of the standard regulation. This, in a sort of way, allows the creation of big platforms that moderate this collaborative action and that have a big impact on the market. Considering the concept of collaborative economy, could an education market be possible? Which would be the contents to teach? Which kind of regulation should it have?

With reference to education policies, another complex theme, there are on-going initiatives approaching the concept of competence-based education. The term of competence is quite narrow as it comes from the world of work, not from the one of education. This suggests that it is not so important to learn contents, but to acquire the necessary skills to respond to future situations. The perception of an old fashioned university, anchored to the traditional schemes of teaching and learning and the highly demanding labour sector, dominated by ICT-driven companies and job requirements related to technology, have been coupled together. This would be possible both at the level of needed competences thought by both university and companies and in terms of costs (loans for course duration).

Bringing together experts from different fields has been experienced in Catalonia before and stimulated technological innovation and provided better connections between business and social sectors.

From the workshop, some suggestions sorted out, which might be important in the light of further research purposes:

- The capacity of analysis is crucial. One of Alan Tait's proposals of research is analysing the way in which part-time study gets embedded lifelong. It is possible to study this case through a longitudinal analysis.
- In the future, one of the main crucial skills will be surely the one of virtual networking, which will be highly valuable. Students, who are increasingly adapted to social networking, may become more and more able to share their experiences in an online setting. The range of people who can access distance learning courses may open up the learning environment to more diverse experiences. Hence, the debate on e-learning must not be focused on university *per se*.
- As the comparison between education systems models showed, there could be hybrid models, thus experts must not focus on online education not because it is closest to a perfect model, but because it responds to diverse needs.
- The current trends on the matter are quite different from what discussed and argued in articles and position papers. People nowadays are freer to select the way they want to train and they alternate different organizational models and diverse institutions. This is the current reality.
- Learning ecologies was one of the brand new phenomena that captured the attention of the panel. It means something personal of every individual in which we identify our opportunities of learning and activate some of them when considered convenient. The

institutions must think about how people will act in the future and which will be their role in this change, as they are not the only ones providing such kind of product. The ecologies have a double axis. There are formal, non-formal and informal activities, which are going to be taken face-to-face, blended and online. This matrix allows to identify the different learning opportunities people can have and can activate. It is important to get that these options have a sufficient quality level and that meet individuals' expectations.

Hence, while it seems clear that online education could present a good option to maintain sustainability along the years providing a quality product and generating some positive outcomes for both the social and educational needs, there are few enough providing evidence of which are its real economic effects and social impact. Thus, further research in this particular multidisciplinary field is highly needed and recommended.

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