

The University and the Digital Transformation of Society

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Introduction

It has always been a major duty of academics to (try to) think ahead. We take 2030 as an adequate horizon for us to somehow anticipate the dimension and the challenges of the transformations on our way of life that are under progress, within this so-called *Revolution 4.0*, and accordingly to prepare the (present and the) future of Higher Education (HE). In this session, some ideas will be presented pertaining to the main face of the polyhedron of HE, the *learning process*, indeed the main subject at stake when we speak of the need for urgent reforms in HE. The main issue to be addressed will be that of how the *digital transformation of society* brings in the need for a *deep pedagogical innovation* attitude, requiring and calling for institutional vision and investment and for individual participation and commitment. Such transformation requires and includes several interrelated initiatives, namely (i) strengthening the concept of *Education without walls and without borders*, by consolidating a new concept of *classroom* and of *lecture*, indeed a *don't lecture* concept; (ii) promoting a dual academic offer, *on-campus* and *online*, making wide use of digital platforms in a framework of continuous education; and (iii) teaching in an era where information, valid and invalid, is abundant and within immediate reach.

Within this context, the following contributions will be brought for the discussion:

A return to the roots of university, by Maria da Graça Carvalho

Graduates beginning a career are increasingly aware that they will have to continue to study throughout their lives to keep up with the demands of the labor market. They know that they are unlikely to have a “job for life” and will probably even change fields. In higher education, what students who are born in this constantly changing technological world expect are

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courses that give them excellent theoretical and practical preparation. But also a training that guarantees them a sufficiently wide repertoire of skills - including the so-called soft skills, such as communication skills and adaptability - to be able to retrace their path as often as needed. Employers' expectations do not differ much.

Concepts such as “multidisciplinary”, “holistic learning”, the replacement of traditional “subjects” with broad “themes” that combine various areas of knowledge, “customized training” options as an alternative to closed courses, are part of the new answers that must be given. However, they will only be achievable with the commitment of policy makers, who have to remove obstacles, particularly legal ones, in order to enable the adaptation of higher education institutions.

In the presentation, emphasis will be put on the necessary reforms needed, in terms of higher education institutions and the higher education system, in order to address these challenges.

Negotiating the sea of information to attain insight, by João Gabriel Silva

Internet search engines have been in widespread use for only about 20 years, but they have profoundly changed our access to information, which is now enormously quicker to obtain. The ease of access to invalid information has also risen enormously.

For educators it is clear that the teaching process has to change in a fundamental way. Classes and courses are no longer a mechanism for students to have access to information, but a way to attain insight from the information they already have, independently of schools, at the reach of their fingers. Leading the students to insight has been the main challenge for a very long time, but it was quite often obscured by the need to provide them with information, as an unavoidable step to insight. Now the challenge for a teacher is save the student from drowning in the sea of information we are all immersed in, that the teacher does not control at all, and bring them to an understanding of things – a very difficult task.

At the same time, the student has to learn, as a matter of survival, to sort out valid information from the deluge of invalid data that floods the internet. The required critical judgement is an ability that has to be developed, with the help of the teacher, something that was not such a central issue just a few decades ago.

Towards Education without walls and without borders, by Sebastião Feyo de Azevedo

The two main sets of issues concerning the education process are those concerning the *academic substance* and the *learning process*. The former has for ages been at the heart, or the heart, of the education process and for sure should not at all be neglected or devaluated in the discussions, but the *learning process* is indeed the main subject at stake when we speak of the need for urgent reforms in HE. This latter will be the focus of the comments that follow. And, what we see is that, possibly still slowly, but steadily, an environment of *education without walls and without borders*, together with a new concept of classroom and of lecture are under construction. Concerning this matter, a number of issues will be raised for discussion, namely: (i) promoting a dual academic offer, *on-campus* and *online*, making wide use of digital platforms in a framework of continuous education; (ii) adopting the existing (and those to come) collaborative tools (e.g. Google Apps and MOOCs), in a process of promoting student emancipation and student centred learning, particularly in terms of self-learning between peers; (iii) adopting (and adapting to) existing (and those to come) tools such as the *digital assistants* or the *chatbots*; (v) adapting the physical space of the Campi to meet the needs of this new learning process.

Irrespective of the degree structure, the learning methods must be relevant in promoting that the students develop skills, competences and attitudes, further to those more directly associated to the discipline, that are recognized today as absolutely relevant for the student global education, viz. - : a multidisciplinary sense and vision of the phenomena; critical thinking for both academic and social issues; a social sense of multiculturalism; a vision of sustainability; ethical judgement; team versus independent work; self-study capacity; communications ability.

All in all, we should have no doubts that a sweeping revision of education practices is indeed required, both at institutional and individual (teachers/professors) level, to meet the challenges not only of a true technological disruption that is happening, but mainly of the expectations of young people that are growing up with completely new concepts of learning, communication and socialization through networking, indeed new concepts of life.