

João C. R. Caetano^{1,a}, Nicolás F. Lori²

¹ Department of Social Sciences and Management, University Aberta, Lisbon, Portugal.

² Faculty of Medicine, University of Coimbra, Coimbra, Portugal.

^a email: jrc@uab.pt



Introduction

Digital information networks, with their tremendous amounts of data, constitute a challenge to the capacity for people to know the rules of the society they inhabit, a knowledge that international agencies often acknowledge as being an essential aspect of citizenship. A very relevant usage of online teaching consists on the use of the internet to learn and produce new forms of knowledge. It is easy today, through Google and Wikipedia, to instantly reach knowledge that in the past would take years to consolidate into our collective memory in a form that could be usefully retrieved by one's memory when circumstances required. Such an ease of access is likely to soon be increased by the launching of Google's eyeglasses, where the internet could be projected into one's eyeglasses upon request. This general, easy way to access knowledge is useful for increased self-consciousness and understanding of the world, as well as to the improvement of the quality of social interactions, but has a reduced market value and can often be overly shallow (Glimcher *et al.*, 2009).

Goals

The creation of useful employment in the future requires the empowerment of people's capacity for producing content that is both unique and portable into digital networks. The essence of the online learning of the future will be its capacity for helping/allowing the discovery by students of the best forms of filtering digital network information that is balanced, good, and relevant. The key for success will not consist in the capacity to have a librarian's knowledge, but rather the development of people that learn by doing, and who learn by thriving to fulfill their capacity to attain knowledge in an autonomous way (Beinhocker, 2006). We describe here the lines of development of online teaching universities in Europe. We specifically focus on how much these universities are responding to development needs as described by governmental and non-governmental international economic agencies (e.g. the OECD) and European associations in matters of education and skill-training (e.g. EADTU) (Dehaene & Brannon, 2011).

The reform of higher education in Europe can currently be seen as a "reform of the reform", i.e. as the reform of democratic access to the universities. This access took place in most European countries in the last 30 years of the twentieth century and meant a dramatic increase of students at universities. Today the main educational goal in Europe is not only to increase the number of people in universities but also to ensure their qualifications, either by the initiation of students to work or by promoting the deepening of the knowledge of professionals. Education is now seen as being for all and throughout life. The question is: how to make better educational policies for better lives? (Freedman, 2005)

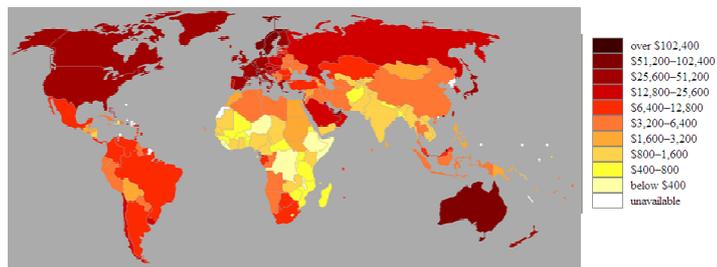


Figure 2: 2011 world map of nominal GDP per capita. From Wikimedia Commons, 2012

Methods

Traditionally the relationship between education and the economy was based on technical-functional theory or modernization. Those theories are similar and differ only on whether they emphasize the effects of education on creating job-relevant skills or job-relevant attitudes. Technical-functional theory has tended to focus on developed countries, while modernization theory has tended to focus on underdeveloped countries (Rubinson & Browne, 1994). This kind of relationship is typical of industrial societies where states had too much weight on the economy and people's lives. It is not true anymore. Technological development and free movement of factors of production have changed the nature of things. Today a virtual economy dominates - Google and Wikipedia are good examples - and, because of that, the success of collective action depends crucially on the autonomy and knowledge of individuals (Beinhocker, 2006; Freedman, 2005). The criteria for individual decisions no longer depend on the allocation of goods by the state but on the knowledge each person has and on the choices that she makes. Therefore it is crucial to promote the education and the training of people in order to make them more autonomous. In our research we suggest a new theory and assess the relevant empirical evidence concerning online effects on educational expansion. We'll also make evident that online learning has an important potential role within the European economy.

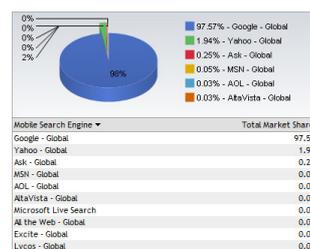


Figure 3: 2010 world map of mobile Google search-engine usage. From SEJ - Search Engine Journal, 2010

Theory

As evidenced by several studies in the field of neuroscience, in situations of interdependence, behaviors depend, to be rational, from what each individual explicitly knows from the outside world (Whitehead, 1978 & 1995). The empowerment of individuals is useful for the cultures where it already exists, as is the case for the countries of northern Europe, but it is even more for the cultures where it is not self-evident, as is the case for the countries of southern Europe. Online learning is an opportunity for students from southern European countries to be in touch with other students and to make a qualitative leap through their training, becoming more independent, in their behavior and decisions, of local governments.

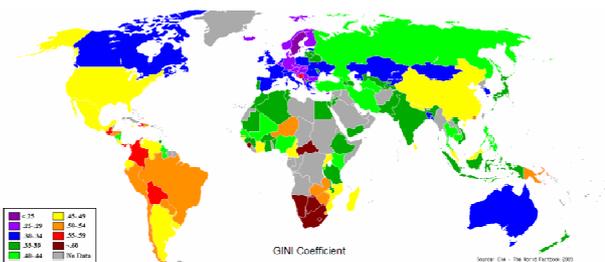


Figure 1: 1989 to 2009 world map of economical equality. From CIA - The World Factbook, 2009

References

Beinhocker, E. D. (2006). *The Origin of Wealth: Evolution, Complexity, and the Radical Remaking of Economics*, Harvard Business School Press.
 Dehaene, S.; Brannon, E. (2011). *Space, Time and the Number in the Brain. Searching for the Foundations of Mathematical Thought*, Elsevier.
 Freedman, T. L. (2005). *The World is Flat: A Brief History of the Twenty-First Century*, Farrar, Straus and Giroux.
 Glimcher, P. W. *et al.* (2009). *Neuroeconomics: Decision Making and the Brain*, Elsevier.
 Rubinson, R.; Browne, I. (1994). Education and the Economy, *The Handbook of Economic Sociology*, Princeton University Press.
 Whitehead, A. N. (1978 & 1995). *Process and Reality*, The Free Press.

Acknowledgements - Financial support by FCT projects: Ciencia 2007.

FCT Fundação para a Ciência e a Tecnologia
 MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR

