Smart Cities Learning

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ABSTRACT

The cities, despite the huge size reached by some and the problems by which they are sometimes afflicted, continue to attract people and pose epochal sustainability challenges to which policy makers and planners have decided to respond with a top-down functionalist approach aiming at transforming the cities in “smart cities”. The purpose of this paper is to present a critical analysis of such approach highlighting its limitations as far as education systems are concerned. The hope is to contribute to arise awareness and foster a timely and necessary redefinition of the functionalist approach to appropriately face an unavoidable transformation of the education system (space, strategies, processes and methods) that in turn will require the future learners to widen their skills to become smart enough to lifelong learn within and from smart territories.

Keywords: Learning Experience, Learning Spaces, New Skill & Literacies, Smart City Learning, Smart City Models, Smart Learner, Smart Places

THE PLAYGROUND AND THE BIT

In a not far future between 70% and 80% of the world’s population will live in densely inhabited urban centers bringing us back to the XVI-XVII century time. Nowadays, however, all dimensions are scaled up and cities are huge aggregates consuming most of the planet resources and significantly contributing to the earth pollution. Of course the relevance assumed by the urban environment for the quality of life of the entire globe is coagulating, since few years, the interest of thinkers, researchers, professionals, entrepreneurs, policy and decision makers and led to the elaboration of the “smart city” vision (Lee at al., 2008; Giffinger & Gudrun, 2010): i) to include within the city’s capitals also the intellectual and social ones, considered as important as hard infrastructures (i.e. physical capital); ii) to exploit ICT as infrastructural backbone to support all our behaviors and improve of all key factors contributing to the regional competitiveness (Hollands, 2008).

Such integrated effort of info-urbanism - embracing ‘smart mobility and last-mile logistics’, ‘smart health’, ‘smart government’, ‘smart culture and tourism’, the sustainability of the natural resources and the green economy - provides the infrastructural background needed to put in practice the UL part of the DULP framework (D -> Design Inspired Learning; U -> Ubiquitous Learning; L -> Liquid Learning Places; P -> Person in Place Centered Design (Giovannella, 2009; Giovannella & Graf, 2010).

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and, inevitably, leads one to wonder about which forms can assume the education in future “smart cities”. To try to shape the future, however, it is necessary to carry out a critical analysis of the present and in particular of the Smart City implementations. Nowadays, in fact, typical Smart City operational models adopt a top-down functionalist approach that aims at optimizing the consumption of primary tangible and intangible resources (energy, water, materials, food, etc.) and to save time which is another important resource, usually associated with both money and individual freedom. To save this time a smart city needs, of course, to optimize and thin the flows of people, goods and data.

Functionalist models, however, tend to underestimate the relevance of the letters D and P of the DULP framework and do not consider that a “smart city” cannot exist without “smart citizens”. In such models “smart citizen” are considered as “smart consumers” that must be educated to take rational behaviors compatible with the policies promoted by the municipalities, usually aimed at promoting a sustainable economical development. Such technocratic and cold visions of the city can be counter-balanced by putting citizens at the heart of the Smart City vision, as individuals feeling smart not only because they have learned to optimize the consumption of resources and preserve the city’s capitals but, rather, because, they are experiencing high standard living with respect to all relevant dimension of the human experience, at both individual and collective levels. Individuals who live in the city, in fact, are persons who, in their work, are driven by motivations and expectations, desires, needs, persons who have their own styles and do not agree that quality of life can be reduced to the optimization of flows and resources consumption, although they recognize that these latter are of paramount relevance for the planet survival. In any case, they are also persons that, because of the increasing complexity/liquidity of the society, need to learn how to define and redefine on the fly their evolutionary path to achieve their expectations.

As far as education is concerned we may state that in the functionalist models of smart cities it is not considered as a relevant enabling factor but rather as a quantitative infrastructural component. Education, in fact, is usually benchmarked in terms of available infrastructures (e.g. density of schools and universities, access to broad band Internet, etc.) and efficiency of the educational system, much the same as for a “productive system”, (e.g. number of students per inhabitant, number of individuals owning a university degree or a PhD (Giffinger et al., 2013)). No reference or very fuzzy one is made to the quality of the learning and no reflections are proposed on the reshaping of education, that likely will be induced by the smartness of the city.

At mass level education is usually identified with a “transfer of information” (see also the outcomes of the survey described in the last paragraph), able to foster the acquisition of the expected rational behaviors. At a higher and more specialized level, education is aimed at the training of the “best brains”, those able to produce the smart ideas and solutions needed for the survival and growth of the “urban organism”.

In this scenario it is pretty obvious that the challenge is to promote the integration of the functionalist top-down vision of the Smart Cities with a more social oriented and inclusive bottom-up vision driven by a “person centered in place” design approach, able to support the harmonious and continuous development of all experiential dimensions relevant to individuals, to the community of belonging and to the contexts of reference; an approach within which the “smart learning” (see next paragraphs) is taken as one of the driving force of the “smartness” and well being of a community.
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