

Schools as driver of social innovation and territorial development: a systemic and design based approach.

Carlo Giovannella ^{1,2}

¹ ISIM_Garagre, Dept. of Educational Science and Technologies
University of Rome Tor Vergata, Rome, Italy
info@mifav.uniroma2.it

² Creative Industries, Consorzio Roma Ricerche, Rome, Italy
giovannella@romaricerche.it

Abstract. This contribution is intended to describe the rationale of a project, in progress, that aims at recovering the centrality of the school through a systemic approach based on the *Design* as operative framework of reference capable to foster the acquisition of an adequate level of LIFE skills, an increase of the social capital and an appropriate level of participation aimed at achieving social and territorial development.

Keywords: Smart Learning Ecosystems, School, Design literacy, Incubator of Projectuality, Social innovation, Social capital, Territorial development, Flow

1 A short introduction to a complex setting

Whether you consider the school as an educational agency or as a relational hub, its relevance with respect to the expectations of the local contexts and stakeholders is continuously decreasing. A process of progressive marginalization that contributes also to the progressive deterioration of the relationships among all educational agencies - school, family, local context - and largely reduces the capability to produce social capital.

Families and schools since quite a long has ceased to produce an integrated educative effort and their relationship assumed the typical characteristics of a *client-provider* interaction. The parents, in fact, tend to delegates the educational function almost entirely to schools, unless giving rise to tedious conflicts when the initial expectations, sometimes oversized, are not met.

The relationship between schools and local context, on the other hand, is nowadays even more evanescent and often is limited to cultural tours aimed at stimulating a first contact with the cultural heritage of the region and, sometime, with the community of reference.

Due to the rapid transformation of the society:

a) the capability of the school to stimulate in the students the growth of a civil consciousness and a participatory attitude in many countries has weakened quite a lot,

also because very often their families tend to consider the “public sphere” not as a common good but, rather, as ownership of “others”, whose interests are not coincident, and sometimes even conflictual, with their own interests;

b) enterprises and other productive realities, although acknowledge the potential relevance of the school, at present do not consider it any longer as an educational agency capable to train effectively and efficiently human resources and transfer to them the technical skills required by the market or, even worse, to foster the acquisition of the horizontal skills nowadays considered essential for whatever professional context.

The landscape is further complicated by the unavoidable activation of a natural and gradual process of replacement of those realities that are not capable to respond promptly and flexibly to the target’ needs (in our case the learners). It is quite clear to everyone how the web is progressively replacing the formal learning systems (like schools) in the transmission of the knowledge (transmissive approach) and how hardly schools are struggling to produce their attractive repositioning on the methodological and critical sides. These latter, in fact, represent what young generations (not always aware of that) needs to realize the transformation of knowledge into abilities and, above all, skills/competencies, the top of which is represented, in our opinion, by the development of an adequate *design literacy* that, with the practice, should transform in meta-design skills [1]. Such repositioning is sometime made more difficult by the scarce propensity of the teachers to work with continuity, and in a systematic manner, on their professional growth or by the lack of systematic governmental action at national and European levels.

In any case, also the acquisition of the meta-design skills by itself would not be enough to stem a collapse of social capital production that, as well known, is strictly connected with the ability to develop meaningful relationships, i.e. trusted relationships aimed at satisfying shared interests [2]. To restore this capacity is necessary to identify a common operative ground capable to attract contributions and efforts by all actors, all stakeholders and all agencies, without forgetting that at the center of the process should remain the *learner* and her/his harmonious growth with respect to the context of reference. It is our opinion that this common playground can be represented by the *social innovation*. In fact, this is a domain in which a formal learning agency like the school can exalt its mission and allow the students to acquire an adequate social consciousness, an adequate level of LIFE skills [3] (thanks also to the adoption of the design as working framework of reference) and stimulate problem solving for and innovation of the territorial and productive context in which s/he lives. This is a setting whose implementation would be highly desirable in territories characterized by a high emigration rate, determined also by the inability to valorize local resources and/or to generate political conditions capable to enhance the attractiveness, and therefore the smartness, of the area.

2 Guidelines for a design based systemic approach

The problems presented by a complex system like the one briefly described in the previous paragraph require the implementation of a systemic approach which, in turn, requires the identification of an operational framework of reference.

On the basis of our past experience [1] we believe that this framework can be build taking as pillar the *Design culture*.

The propensity *to Design* can be considered as a mental habit that reifies itself in all processes that anytime and in all situations aim at modifying a given context to improve/innovate it, in any respect. In our case the *context* is composed by the territory and the community of reference of the school - included the school itself, and the focus of the design activities, as discussed below, should be the *social innovation*. In this framework creativity is never an objective by itself but should be always stimulated and finalized to solve problems with the aim to improve the quality of life and the well being. Design culture also means adoption of a significant bouquet of methodologies and techniques that, when applied, are capable to stimulate the acquisition of a complete set of skills, like for example: critically analyze and learn from the collected data; identify possible lines of intervention (problem setting); deal with ill-posed problems; diverge to imagine plenty of possible solutions; verify, also comparatively, all possible solutions for viability, sustainability, etc..

The mere adoption of design methodologies, however, is not by itself a guarantee of success and could lead to results far below expectations, and therefore to a possible disappointment, when you are not able to frame and systematize their use within what can be considered the Design cornerstone: *the process*.

The use of any method, in fact, if not integrated in a process risks to give rise to episodic learning and teaching out of which is difficult to make emerge all potential educational benefits. This is especially true when you consider one of the learning goals mentioned in the previous paragraph: the acquisition of an adequate level of LIFE Skills.

According to [3], LIFE Skills can be clustered in three macro-groups - individual skills, socio-relational skills and management skills - each one of which hosts a certain number of subgroups of LIFE skills. Each design method by itself would be capable to stimulate the development of one or more of such skills but it is only when they are combined to support the flow of the process that became possible to calibrate the methodological choices and their concatenation to put in place an educational path capable to foster the progressive and harmonious acquisition of an adequate set of interconnected LIFE skills.

However, also the most careful designed process risk to appear episodic in nature if the *design based approach* does not penetrate into the DNA of the school or fail in stably involving all actors of the educational process and, as well, the local stakeholders. And this is likely to happen only when the design interventions focalize

on the needs of the territory and its community of reference. Hence the need to foster and accompany the setting up into the schools of incubators of projectuality dedicated to *social innovation* [4], intended also as driver of an economic and sustainable development of the territory, tailored on the needs of the local community.

An effort that has to be sustained by a parallel networking action addressed to the establishing of more meaningful relationships among all training agencies - schools, families, local stakeholders - in order to raise the level of mutual trust and individual accountability toward the achievements of goals of common interest [2,5]. In other words, to sustain the transformation of relationships in social capital.

The networking action, of course, should involve also the local policy and decision makers. These latter, in fact, represent one of the propelling components of the triple helix model [6,7], and more specifically the only one, nowadays, capable to generate the favorable conditions for the transformation of the territory.

In fact, during a period of economic crisis like this one, due to the opportunities offered by the globalization, the enterprises (one of the helix) establish their productive activities only in territories capable to create favorable conditions for their business. Enterprises, thus, with few exceptions, have no longer the role of initiator of the local economic development. Education and research (the second helix), today, are largely affected by the reduction of financial resources - with the exception of some domains who managed to tap the crowd funding, eg. medical research - and thus, always with few exceptions, have lost their capability to lead the innovation of the productive environment.

Local governments (the third helix), therefore, have the duty to create favorable conditions for the economic development to attract enterprises, investments and, thus, revitalize the research and the educational cycles. In our specific case, that of the schools, they should support and amplify the positive energies that could be channeled by the incubators of projectuality, facilitate the development of social capital and integrate the resources made available voluntarily by the members of the community, valorize the outcomes of the design process.

3 The role of ICT

In such relational perspective where the learning cannot be confined any longer neither in the minds of the students nor in restricted physical places, like those of classrooms, ICT - beyond playing the role of technological backbone capable to favor the optimization of goods consumption (contents and time included) - are expected: a) to play a mediation and facilitation role and, thus, to amplify the number of meaningful relationships, to disclose cultural models, symbols and codes; b) to offer an ensemble of pedagogically inspired functionalities and services to go beyond the web 2.0.

This is especially true nowadays since by now the web embraces, at the same time, the meso-, eso, and macro- dimensionalities [8] of the relationships among individuals and bodies to produce a very robust system of relationships, not necessarily identifiable as social capital and that, on the contrary, may represent a veritable danger. Students, indeed, do not own always a structured critical apparatus, able to disclose all characteristics of the context and support the independent decision about accepting or remodel it, what is needed to support individual, and more in general, human development.

The technological environment should be, therefore, capable to satisfy the multiple requirements of the operational framework described above and provide at least: a) support to the design processes to allow for an advanced and technology enhanced use of most of the methodologies employed in the design for social innovation; b) a meeting point capable to foster exchanges and cross-fertilization, think-tanking and sharing to foster trust generation and finalized collaborations; c) methodological support and mentoring to teachers (or other professionals) that will take care of the starting-up and management of the incubators of projectuality; d) the ability to export data and provide smart analytics to evaluate process performance and skills acquisitions; e) an easy access to an integrated and interoperable world of services, hopefully offered by multiple parties.

4 Contribution to the smartness of the learning ecosystem and of the territory of reference

To conclude a short note about the smartness of learning ecosystems and their territorial contexts. According to the model that we have recently developed [9,10], the attractiveness of a context, including that of a learning ecosystem, is determined by *the level of “flow” [11] achieved by the individuals populating it, that feel continuously motivated by challenges that are adequate to the owed level of skills, while its primary needs are reasonably satisfied.*

It is quite evident that the development of incubators of projectuality are expected to support the acquisition of an increasing level of smartness of learning ecosystems centered around the schools. Students and the whole community of stakeholders are expected to increase their level of LIFE skills and of *design literacy* and at the same time to get motivated by design challenges that aim at finding sustainable solutions to the needs of their communities of reference: from primary ones up to the higher level of needs as represented by the Maslow’s pyramid [12].

5 References

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