Chapter 16

Higher Education, Technological Change, and Local Development: Experiences and Challenges in Cuban Context

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ABSTRACT

In the 90s, Cuban universities directed their efforts toward innovation. This “innovation turn” intended to increase the role of Higher Education (HE) in the economic recovery of the country and the solution of significant social problems. At the beginning of last decade universities began to project over the subject of local development (we have called this process “territorial turn”). In the document is explored the capacity of HE to unfold nets that allow the flow of knowledge and technologies for local development. Its role as key actor on the promotion of innovation in municipalities is also analyzed. Through case studies methodologies, it is discussed a group of practices related with alternative energy production, food production based in agroecological methods and the echo-materials production for housing. Each one of those socio-techniques trajectories, emerged in Cuban HE institutions, pay attention to social inclusion, cohesion and social integration goals.

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INTRODUCTION

In spite of the persistence of health and education social policies, the existence of subsidized products and services, and the effort for the most equal possible wealth distribution; in Cuban society that emerges slowly from the deep economic crisis the country has lived in the 90s, are appreciable important lacks in many people’s daily life. Without doubt phenomena like poverty, inequality, inequity, marginality have been accentuated in the last decades (Espina, 2012).

For Cuba, is urgent to notably increase food production, to accelerate housing, to enhance the use of renewable energy sources and to facilitate the access to their benefits to a bigger number of people, among other many imperatives. It is important to highlight that those necessities demand the unfolding of technological and innovative solutions, supported by knowledge, scientific research and formation processes.

In Cuba, like in other countries of Latin America, most of the science and technology capacities are concentrated in the universities. It is not simple however, to connect those capacities with the necessities of people’s daily life. Frequently, the university agenda, their prevailing institutional structures and policies and incentives systems generate scientific and technological dynamics barely connected with those daily necessities. The links between researchers (and their institutions) and communities are usually not sufficiently intense as to promote “innovative circuits” and “interactive spaces of learning” (Arocena & Sutz, 2006) that the solution of such problems claims.

In the first half of the 90s, science and technology policy formally assumed the objective advancing toward a science and technological innovation system. The purpose was to unblock the created capacities, mainly scientific, to produce new products, goods and services. Two decades later the results reached are far from being satisfactory (Núñez & Montalvo, 2014). Nevertheless, this orientation to innovation in the scientific and technological policy propitiated what we have called the “innovation turn” in some universities.

The context for innovation policy in Cuba is changing substantially. During 2011 were approved a group of economic and social guidelines that signal a turn in the development strategies in Cuba (PCC, 2011). The formulation of such Guidelines was the result of a wide discussion process among the population that lasted several months. Those Guidelines try to face a big group of long lasting economic and social problems in the country. The document constitutes a group of principles, organized in 12 chapters related with socio-economic issues. Some of them are: economic management model, macro and micro-economic policies, domestic and foreign economy policy, social policies, etc. The fifth chapter deals with Science, Technology, Innovation and Environmental policy. The “Economic and Social Policy Guidelines of the Party and the Revolution” were approved by the Cuban Communist Party in 2011.

The Guidelines propose a group of technological changes. They offer new options for the satisfaction of social necessities as housings, food production, the increment of renewable sources of energy, among many topics. The document also promotes a bigger participation of HE in the solution of this problematic issues.

We would like to highlight two main ideas or focuses in the Guidelines:

- The diversification of the productive forms and the promotion of the cooperative and private property.
- The promotion of decentralization in areas such as decision making and the economic and financial administration.