

# CONDITIONS FOR THE PROMOTION AND DEVELOPMENT OF CREATIVE INDUSTRIES WITHIN HIGHER EDUCATION INSTITUTIONS

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## ABSTRACT

Higher Education Institutions (HEIs) play an important role on the promotion and development of creative industries (e.g. product design companies). These roles, however, are not clearly defined. Previous studies by the authors, conducted in Colombia, encountered several critical internal factors as well as environmental relationships proper of the ecosystem of business that affect performance in creative industries. HEIs can promote specific activities to become agents that enhance the development of these creative industries, thus contributing to overcome environmental and critical internal factors. This paper presents a model that can serve as a starting point within HEIs to establish policies towards this goal. For such purpose, the present research extended the aforementioned studies to Argentina and the United States, countries recognized worldwide for the development of "creative industries" or "creative economy". Fieldwork was performed in nine cities: two in Colombia, two in Argentina and five in the United States. Data was collected via interviews and focus group studies conducted at universities and creative industries, as well as with experts, government representatives and support organisations. A PESTEL analysis was used to identify weaknesses that could become opportunities for action within HEIs. The results allow for the establishment of nine key roles of the HEIs (i.e. education, moderator of the ecosystem, research, foster discussion, investment, on-going support, dynamism, joker, and simulation/real environment) that can be related to these institutions' substantive functions (i.e. teaching, research, extension, and support and integration), which contribute to enhance the development of creative industries, their growth and long-term sustainability.

*Keywords: Creative industries, creative economy, role of higher education institutions, PESTEL.*

## 1 INTRODUCTION

In the last years numerous studies have been conducted to understand the economic phenomenon of creative and cultural industries [1], [2], [3], [4], [5], [6]. "The new creative-cultural industries have progressively transformed into one of the main sources of production and employment for many countries" [7]. The studies show that these industries have been gaining territory in regional and international markets, amounting to a considerable economic participation. It is estimated that the cultural and creative industry represents between 3% and 7% of GDP in different countries.

Previous studies have allowed the identification of non-existing or non-adequate mechanisms to provide support to the real and particular needs of cultural and creative entrepreneurs, their dynamics, and the speed at which the sector changes. It was evident that there are many empirical initiatives of self-education and self-training undertaken by industries in the sector, which cause a disparity between the companies; this result in difficulties to materialize certain partnerships such as associations or guilds, and to make possible service or product exchanges, sustainability, international projection, and growth.

Along this same topic, it was possible to observe that support has been limited to general courses that, in the best case scenarios, try to extrapolate the tools that have conventionally served other types of industries, such as technology-based or manufacturing ones, ignoring in many cases the particular dynamics and specific necessary for the creative industries' development. Similarly, it was found that entrepreneurs have a low level of professionalization, and their experience does not count for the existence of support and education for the sector. Furthermore, the aforementioned studies also

indicate the lack of consensus, regarding the formalization and education schemes the sector needs from the HEIs. This leads to promotion and development schemes that are not wholly pertinent, and that are essentially empirical, resulting in unsatisfied entrepreneurs when they seek for help.

The Research Group on Innovation and Entrepreneurship together with the Design Engineering Research Group at Universidad EAFIT conducted this qualitative research in Colombia, Argentina and the United States with the purpose of identifying the main actions that HEIs should carry out to create an environment that promotes the creation, establishment, development, growth, and evolution of cultural and creative industries (CCI). This study shows that HEIs can perform diverse, varied, and unusual roles in regards to each one of its functions. This statement is a considerable finding since it serves as a guide to reflect on the actions of HEIs, keeping in mind that the substantive functions do not end in themselves, that is, teaching does not end in the classroom, research does not end in the lab or in a report, and extension is not only continuing education courses. As can be observed, each role represents great possibilities and responsibilities for each one of the substantive functions.

## 2 RESEARCH METHODOLOGY

In the current research, of qualitative approach, focus group and in-depth interviews were used for data gathering. Four target groups were selected for such purpose: students, entrepreneurs, professors, and experts in the field. In the cases where in-depth interviews took place, due to the difficulty to gather target groups for a focus group, the interviews assured there would be enough quality information for the analysis. This process was followed for all the cities included in the fieldwork: Bogota, Cali, Medellin (Colombia); Lujan and Buenos Aires (Argentina); Los Angeles, San Francisco, Redwood, Pasadena, and Palo Alto (United States).

Table 1 shows the detail of the testimonies gathered, according to each target group in this research. The totals in this Table do not correspond to the total number of people interviewed, since some of the interviewees were considered in more than one category of target group. The category “Expert Testimonies” emerged during the development of the project, since in each region it was possible to identify key people whose testimony added valuable information to the research.

*Table 1. Testimonies by Country*

Country	City	Entrepreneurs	Students	Professors	Experts
Argentina	Buenos Aires	5	5	3	13
	Luján	1	0	1	1
Colombia	Bogota	2	10	7	4
	Cali	3	3	3	2
United States	Los Angeles	3	0	1	1
	Pasadena	2	0	0	0
	San Francisco	2	0	2	3
	Palo Alto	1	3	1	0
	Redwood	2	0	0	0
TOTALS		<b>21</b>	<b>21</b>	<b>18</b>	<b>24</b>

The information was processed from the transcripts of the focus groups and the in-depth interviews and, later on, analysed based on the frame of the PESTEL analysis [8] using content analysis technique. This process was divided in two phases:

- **Phase 1:** The information obtained was identified, classified, and analysed. These activities lead to common trends, shared opinions, divergence points and, conclusions for each target group.
- **Phase 2:** In this phase the idea was to identify the convergence of the different target groups, in order to ascertain conclusive points regarding the outside environment, the role of the HEIs, and the opportunities for action to strengthen and promote CCIs.

## 3 RESULTS AND FINDINGS

Even though the particular analyses account for political, economic, social, technological, environmental, and legal conditions of each region, the Research Groups arrived at a series of incidental findings labelled as “Dynamics”, which resulted from grouping the weaknesses identified in

PESTEL. They were categorized as dynamic, since this term describes the factors (in this case weaknesses) capable of altering a physical system (the CCIs ecosystem). Upon grouping the weaknesses, dynamics had to be considered in order to identify possible compatibility. Lack of compatibility led to create a new dynamic that refers not only to the possible role of HEIs in the promotion of creative and cultural entrepreneurship, but as a characterization of a certain set of conditions that, in light of the testimonies gathered, must be taken into account for the development of such entrepreneurship. The mentioned “Dynamics” transcend the scope of action within HEIs, but condition and limit it: entrepreneurship, effectiveness of the ecosystem, country prospects and vision, work dimension, archetypes, market, strategic efficiency, social dimension, environmental issues, security, identity, follow-up in the sector, education, industrialization and development, regional integration, investment, update, industry valuation, involvement of the companies in strategic actions, outside influence, and understanding and transformation of the industry.

Nevertheless, and regarding the scope of this research, the conclusions focus on the roles that are inherent to the HEIs in terms of their direct actions and of their substantive functions: teaching, research, extension, and support and integration. Table 2, below, shows the 9 roles identified for HEIs.

*Table 2. Roles of HEIs*

<b>ROLE 1</b>	Education	Refers to everything related to education, not just from the delivery and construction of interdisciplinary knowledge, aligned with practice and industry reality, but also from the reinforcement of imaginaries, values, and criteria, plus advisory and training. This education requires pertinence, integrality, transversality, and connection with reality.
<b>ROLE 2</b>	Moderator of the Ecosystem	Implies the articulation and harmonization of the factors that compose the system and with them the establishment of contacts, bridges, and networks that allows them to have two-way relations, exchanges, and feedback in a healthy and effective way. Furthermore, it has to do with its own participation and involvement with the sector.
<b>ROLE 3</b>	Research	Begins at the fostering and promotion of research, extending to pertinent research, and finally ends in useful and concrete products which serve as a valuable input for different interest parties. It also includes experimentation through trial and error.
<b>ROLE 4</b>	Foster discussion	In order to guarantee the generation of new knowledge, adequate to context, not having to copy other models. This includes thought, conceptualization, prospection, critique, and debate.
<b>ROLE 5</b>	Investment	Refers to the resources at the service of education, financing, and incubating projects, or attracting others to provide those resources.
<b>ROLE 6</b>	On-going support	Related to the support for alumni in terms of constant training, advisory, and education, as well as assessment to their careers or their entrepreneurial ventures.
<b>ROLE 7</b>	Dynamism	Implies moving to the rhythm of the world, the market, and technology. Requires great flexibility to adapt strategies, tools, methods, curricula, amongst other issues, and generate new actions that respond to current threats and opportunities.
<b>ROLE 8</b>	Joker	It is expected that HEIs identify the voids in the ecosystem, those fronts that are not being covered, and direct their efforts to fill such voids in such a way that fluxes are not interrupted there.
<b>ROLE 9</b>	Simulation of real environments	Implies the fostering of academic environments in which students can practice and test their knowledge and skills based on the recreation of actual contexts and situations. Simulators, role-play, and other strategies may be used.

The findings drawn from this analysis were organized keeping into account the substantive functions of the HEIs that, for this research, are the following:

- **Teaching:** All activity that impacts quality and characterization of curricular design of practice-oriented education programs.
- **Research:** All activities related with the generation of new knowledge that feeds the University and its essence.
- **Extension:** All activities related to continuing education in the areas of knowledge and expertise of the university, and activities that support and promote knowledge for the benefit of the community.
- **Support and Integration:** All activities that complement the possibilities and richness of the other three, but that are not necessarily tied to a specific knowledge of the university, but to the role it represents in society.

The last function of “Support and Integration” emerges as additional to the traditional substantive functions (Teaching, Research and Extension) since certain situations call for HEIs to act in a context that is more related to their capacity and intention to impact society. The characterization that follows of the Roles in relation to the Functions of the HEIs responds to the particular and forceful needs for the promotion of creative and cultural entrepreneurship within HEIs. Table 3, below, shows the relation between the substantive functions and the identified Roles.

*Table 3. Relation between substantive functions and Roles in HEIs*

	<b>Teaching</b>	<b>Research</b>	<b>Extension</b>	<b>Support and Integration</b>
<b>R 1: Education</b>	x	x	x	x
<b>R 2: Moderator of the Ecosystem</b>	x	x	x	x
<b>R 3: Research</b>	x	x		
<b>R 4: Foster Discussion</b>	x	x		x
<b>R 5: Investment</b>	x	x		x
<b>R 6: On-going Support</b>			x	x
<b>R 7: Dynamism</b>	x		x	x
<b>R 8: Joker</b>		x		x
<b>R 9: Simulation/ real environments</b>	x	x	x	x

The Table shows that the new function identified of Support and Integration has a fundamental role since it calls for HEIs to become third generation institutions [9], with a scope that transcends traditional endogenous functions, in the sense of them being education and research centres, but becoming more relevant in the modelling of society, and in a more direct and active relation with it. Similarly, it can be observed that the traditional functions are perceived as more robust, going beyond the simple definition of teaching, doing research, and offering continuing education programs. The configuration of these findings allows HEIs to identify strategic areas for action, depending on the contexts and resources available to each HEI, it also aids in the design of strategic plans that seek to promote the development of creative and cultural entrepreneurship.

#### 4 DISCUSSION AND IMPLICATIONS FOR HEIs AND PRODUCT DESIGN ENGINEERING EDUCATION

HEIs can perform many, varied and unusual roles regarding the substantive functions. This statement is in itself a significant finding of this research because it guides the reflections on the actions of the HEIs, understanding that the substantive functions are meant to be enhanced; this means that teaching does not end the classroom, research extends beyond a laboratory or a research report, and extension is not reduced to continuing education courses. Each of these roles represents an enormous scope for action and responsibilities associated to each of the substantive functions.

**Teaching** calls for a theoretical and practical education, strongly related to all areas of cultural and creative industry. This allows product design engineering students to be aligned with the professional exercise and also to develop the necessary competences, essential for business practice. Similarly, contextualized and globalized education should be offered without sacrificing the needed expertise in different areas of knowledge around product design engineering. Since this is a profession that requires specific knowledge, education oriented to develop skills in arts and technology is

fundamental, geared not only to the development of talents, but also to critical thinking in the individual to face the challenges of creative economy. General education and other extrapolated knowledge –transferred from other fields without special consideration to the particular requirements of the cultural and creative industry– proves to be increasingly irrelevant and inadequate to meet the challenges and opportunities faced by the industry.

Correspondingly, Teaching, as the means for the integration of knowledge, should promote interdisciplinarity. This requires keeping up with the ever-changing pace of the industry to be at the forefront of knowledge, and adapt to new needs and learning opportunities that arise for the industry. Education needs to be open to new possibilities mediated by ITs [10], which involve a different form of interaction in classrooms and require the development of new skills for both: teachers and students. In addition, Teaching requires the application of best practices, and is called to be competitive not only in comparison between institutions, but also in relation to market requirements, and to the challenges the industry faces.

Finally, the role of Teaching is also called to educate in the discipline of research work, which is closely related to the innovation capacity of the industry, allowing it to work for its development and continued growth. Product Design Engineers trained in research skills have the ability to do competitive intelligence and manage resources necessary for product innovation and the creation of R&D areas.

The **Research** function finds new paradigms. While research undertaken by HEIs is key to the development of knowledge and the promotion of innovation, this function transcends the development of research as part of the in-class academic work, and faces the institutions with the need to create practical, active and applied knowledge; making it visible not only in academic media outreach, but also through those means that allow all stakeholders of the cultural and creative industry to access information constantly and regularly. The knowledge generated by research must feed the debates that seek to shape market conditions and regulatory frameworks that affect the development of the cultural and creative industry. Researchers should be active and participative working with the industry, being the bridge between theory and practical exercise in day-to-day business. HEIs are also called to determine the priorities of knowledge that the industry is requiring according to current and projected needs, aligning the interests of HEIs themselves, with the environment and government strategies.

The constant development of knowledge through research should impact the function of Teaching, offering updated and relevant issues, techniques and tools for learning. Knowledge should not be idle, but helpful in every possible and practical dimension.

The **Extension** function is particularly important for the promotion of product design engineers acting as entrepreneurs, and also for the HEIs. It becomes a means that allows institutions to expand the scope of their impact, while facilitating new revenues from portfolio diversification, offering consultancy, courses, lectures, and training, among other services. By promoting product design engineer's achievements through trade fairs, exhibitions, and other spaces in the community, HEIs might help to make visible the benefits of these professionals to the industry. Interviewees repeatedly stated that HEIs, in their potential as convergence places, are not taking advantage of the many opportunities the campus's infrastructures offers.

Through Extension HEIs must make knowledge built in the academic exercise available through continuous education, facilitating constant updating for the members of the industry. The convergence of different audiences to these Extension spaces promotes and supports networking among all members of the community (enterprises and product design engineers). HEIs are required to have an active role in community integration.

The new identified substantive function, **Support and Integration**, puts HEIs in a position where they need to recognize themselves as articulators, not only of the ecosystem, but also of the different tasks and activities within the other substantive functions (Teaching, Research and Extension). This new function calls HEIs to be third generation educational institutions. Thus, HEIs become spaces that articulate and integrate the community, while being mediators of the relationship between all actors involved in the cultural and creative industry.

This function requires from HEIs promotion and management of partnerships between the different stakeholders in the industry to help networking, while convening experienced leaders and managers that support the growth and development of the industry. HEIs should be centres of convergence of experience, knowledge and resources that augment the growth potential of the industry. They are able to show results that draw attention and interest of other HEIs, partners and supporters, which in turn

provide more experience, knowledge and resources. An example of this would be an increase in projects supported by agencies like the World Bank, IDB, AECI, British Council, local and national Governmental agencies and others alike.

This new function calls HEIs to promote and support success stories (start-ups and spin-offs) that can become a point of reference for new product design engineers and the industry. The experience built by HEIs through these actions, provide them with knowledge and know-how to strengthen the industry value chain. The HEIs are a repository of knowledge and information whose responsibility will always be in giving back to society that knowledge into actions that add value.

All previous statements about the substantive functions of the HEIs suggest a model for the promotion and development of cultural and creative entrepreneurship (including product design engineers among others), appropriate for the context of higher education. The results of this research suggest that HEIs may become agents that enhance and impact the development of the industry, to the point of affecting economic indicators showing prosperity, growth and long-term sustainability of the cultural and creative industry, as long as they develop specific activities according to each substantive function. This, of course calls for reflections upon HEIs' conventional structure, so they can adapt to new emerging challenges and opportunities, while remaining true to their role in society. These findings, in summary, are meant to be, "fresh insight that may lead to useful prescription" [11].

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