

How do Innovative Initiatives Spread In Complex Educational Organizations?

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Résumé

La volonté de comprendre les dimensions stratégiques et humaines du contexte universitaire conduit à s'interroger sur le rôle des professionnels dans les processus de transformation organisationnelle. Le concept d'intrapreneuriat et une étude de six cas d'innovations pédagogiques dans des universités francophones permettent d'analyser en profondeur quatre trajectoires d'initiatives innovantes.

Mots clés : innovations émergentes, universités, processus intrapreneuriaux, innovation de services publics

Abstract: How do Innovative Initiatives Spread In Complex Educational Organizations?

In order to better understand human and strategic dimensions of the university environment, this paper examines the role of professionals in the process of organizational transformation. Drawing upon intrapreneurship concept, it describes findings from a case study of six initiatives in French speaking educational institution. Four organizational impacts are distinguished.

Key-words: bottom-up innovations, universities, intrapreneurship, public services innovation

Introduction

Since the 1980S, in the context of changes in the governance and management of public organizations, the interests of researchers of public management have progressively developed in the field of university organizations, with autonomy as an important question (Bartoli, 2002), (Côme, 2013), (Pupion, 2011). Evolution of universities in the contemporary world, opening Pandora's Box, reveals a particularly delicate dual complexity : a) universities are populated by professionals whose missions, activities, and time management differ profoundly : b) the articulation of multiple levels of regulation varying, at the establishment, the discipline, the nation or the international setting , is delicate (Musselin, 2005).

You can generally divide researches about university performance in two major complementary streams. The first approach of "public policy" focuses on the study of the effects of reforms, autonomy concerning relations between the university institution and the ministerial trusteeship. The second approach, more founded in organization studies, favors analysis of the internal processes of the establishments, autonomy being relative to the relations among the participants. These are the pressing issues that our communication has investigated. One objective of this paper is to contribute to the debate on managerial practices in academic context and innovative teaching. The term "university" is used here to designate, broadly, any establishment of public higher education.

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A number of works is based on the internal functioning of universities. Beyond their diversity, university represents a significant situation of the autonomy of professionals who work there, like, for example, to some healthcare organizations (Bartoli, 2009, p. 231). University complexity renders, furthermore, the object of consensus in literature in accord with the description as a place of tensions between two distinct rationales of action: professional logic of experts, and administrative or managerial logic. By contrast, interpretation of the impact of this dual logic on the collective dynamic of universities offers opportunity for diverse responses. For certain authors, different rationales are incompatible, which translates into an absence of capacity for collective action, as in "the image of the garbage pail" (Cohen, March, & Olson, 1972). In this perspective numerous local initiatives do not favor the emergence of the establishment of common goals, and interaction between participants seems uncertain in the context of the absence of leadership and authority. Other authors, on the contrary, estimate that one can identify that logical intervention can be identified in university procedures (Mintzberg, 1982)(Musselin, 1987). Thereby local initiatives of professionals can lead to certain common objectives.

Despite their richness, the few existing works scarcely examine the collective dynamics in university organizations, their weak interdependence, and autonomy are often connected to the absence of linkage among the participants. In addition, certain research in the sciences of education estimates that the sources of change are external to educational institutions (Huberman, 1973). In fact, these works leave the greater segment in the shadow of the significant role which academic personnel can play in light of new challenges of governance and plurality of the stakeholders (Come, 2013). Considering on the other side, that interaction between the individual and the corporate body in the university context can turn out to be a determining factor, we approach this question from the angle

of innovative initiatives proposed by universities. We wonder if these constitute strategic processes, which are to say as well as to participate in the accomplishment of missions and objectives of a university establishment. These missions may be completely or partially established in a regulatory framework.

The paradigm of the "intrapreneurship", conceived as a bearer of a conciliation of opposing logics, (Thietart & Forgues, 2006), the objective of this research undertaking seeks to characterize the procedures of original initiatives of professionals, and to study their organizational impact. Entrepreneurial framework, defined as "*a process by which individuals--either on their own or inside organizations--pursue opportunities without regard to the resources they currently control*" (Stevenson & Jarillo, 1990, p. 23). The entrepreneurial procedure defined here is an internal process which extends from the emergence of an idea of its implementation at the heart of the organization, the process of intraorganizational innovation. Our issue focuses on the comprehension of the procedure of emergence and the diffusion of new ideas and practices in the university context. The qualitative study is a design for such investigation. Our results show that the requirements of both professional and managerial logic, however contradictory, are complementary in the evolutionary processes of university teaching practices. Academic involvement is essential to generate innovative procedures, while managerial practices can hinder or support the propagation of innovation.

A first part, concerning the theoretical foundations of analysis, is dedicated to the definition of entrepreneurship, as well as to organizational specificities of universities, in order to create a reading grid of initiative procedures in this environment. The second part is dedicated to the presentation of methodological device and case studies. It is a question of demonstrating in what light development of initiatives of innovative teaching practices can be

considered as entrepreneurial practice in universities. The results, the identification of diverse procedural mechanisms, according to conduct, are presented in the third part. They form the topic of discussion in the conclusion of the article.

1. Innovative initiatives in mature organizational context: theoretical foundations.

In order to offer a conceptual framework for the understanding of innovative initiatives in the university context, it seems appropriated to use the concept of "entrepreneurship" for an analysis of the processes of innovative initiatives in mature organizations, and to take into account the organizational specificities of universities which influence their transformation.

1.1 The concept of intrapreneurship

In the domain of management research on entrepreneurial phenomena situate themselves at the intersection of varied fields: administrative science, human resources, organizational psychology, strategic management, or management of innovation. Literature on the entrepreneurial concept demonstrates polymorphism in as much as it is approached on different registers and, other than issues (Carrier, 1993). Despite the diversity of definitions, the multiplicity of vocabulary use, and the procedural diversity of entrepreneurial structures, the literature recognizes a certain consensus - a narrow link with innovative procedures - a link whose nature will not be debated here - the importance of limbs of organizational context in these procedures, and the research of new opportunities by the creative capacities of individuals (Carrier, 1993). Numerous authors have theorized on models favoring entrepreneurship, conceptualized as a new form of management, leading members of an organization to innovate and behave like entrepreneurs in its service, that is to say an internal procedure of an existing organization which leads to activities and

innovative orientations (Antoncic and Hisrich, 2001).

Three major questions guide the research on entrepreneurial phenomena: effects, causes, and process (Stevenson & Jarillo, 1990). The first question about effects is concerned, mostly, by economic and static analyses. More dynamic analyses focus on managerial processes while recognizing the individual innovator. A review of this literature shows that these works have shifted from an individual perspective toward a more collective one. Three major conditions of entrepreneurial processes simultaneously integrate individual attributes of "entrepreneurs" and organizational characteristics have emerged: risk-taking, interaction among participants largely born of collaboration, and the importance of the organizational climate at the heart of a dual procedure.

1.1.1 Opportunities, autonomy and risk-taking

For the trend of intrapreneurship of interest to the participants, motivation of the creative individual is the source of innovation. The concept of entrepreneurship above all reflects the initiatives of creative individuals (Burgelman, 1983b). Examination of the literature demonstrates that works have evolved from a concept of the creative, and essentially individual innovator, toward a more collective one.

The entrepreneurial process is conceptualized as essentially individual in approach by personality traits. Works in this perspective are geared to the inquiry of characteristics of individual cases. Focus is, therefore, placed on the personality of the creative individual. In that somewhat psychological orientation organizational procedures are absent and the influence of managerial procedures seems secondary or marginal. From the first works on « champion » (Schon, 1969), the importance of certain organizational participants, those able to overcome obstacles and contribute to the accomplishment of innovational ideas, is recognized. Works on the approach by

personality traits have emphasized that the major individual characteristics of people who adopt entrepreneurial behavior have the propensity for risk-taking, the need of autonomy, fulfillment, approach toward objectives, self-control, inherent motivation, and creativity (Amabile, 1988) (Pinchot, 1985). In this perspective, managerial procedures, notably the involvement of directors and their behavior regarding initiative, influence the indirect manner of the creative progress (Burgelman, 1983a). Organizational factors of innovating procedures are considered to be essentially tied to structures (Burgelman, 1983a) (Covin & Slevin, 1991). Structures which are favorable to innovative procedures are described according to various factors: decentralization, formalization, professionalization, technology, etc....

Approach by these personality traits presents limits in so much as it does not appear to be sufficient to explain the phenomenon of innovation or entrepreneurship only by the psychological characteristics of the individual innovators, and by only their organizational structures. Certain authors thus reconsider this overly individual and determinist vision of entrepreneurial procedures, which focus on "who" is the interpreter, and less on what the interpreter "does" (Stevenson & Jarillo, 1990).

On the other side, the works dealing with approach by behavior conceive entrepreneurship under a more collective lens, resting on the exchange of knowledge and the sharing of experiences among the participants to complementary profiles (Gartner, 1988). The accent is placed on different social roles and, thus, on the of the individual innovator. The entrepreneurial procedure is conceived as collective, directed by an individual or a group who actively supports it. Thus, the elements of entrepreneurial procedure simultaneously touch on the personality of the individual innovator as well as on organizational factors. The entrepreneurial procedure is influenced by managerial practices and by the -odynamic of support of the initiatives (Carrier,

1993) (Bouchard & Fayolle, 2011). The vision of the individual innovator here draws closer to the conceptual idea of the promoter (Goepel et al., 2012) (Witte, 1997). The analyses of the entrepreneurial dynamic demonstrate that the principal characteristics of entrepreneurial behaviors are risk-taking and autonomy (Alter, 2000) (Burgelman, 1983b) as well as the ability to recognize opportunities. (Carrier, 1993).

1.1.2 The necessary construction of a collective action in the course of contradictory activities

Two types of research provide information about the role of the individuals concerned by "intrapreneuring" and pursuing innovative initiatives: on one side, those about networks building and, on the other side, those about relations between the intrapreneurial processes and the organizational processes.

Walter & al.(2011) distinguished four components pertaining to innovative procedures: the pursuit of innovational ideas, the formation of a network, perseverance in the face of obstacles, and taking responsibility for the idea. The capacity to form and build a social network was also underlined in other works on entrepreneurial procedures (Aldrich & Zimmer, 1986), as within the domain of innovation in education (Huberman, 1973). Research on the diffusion and adoption of the sociology of innovation, particularly analyses based on the theory of the project have shown that innovation does not result uniquely from the addition of individual decisions but constitutes a procedure where social interaction is indispensable (Latour, 2005). The individual thus develops opportunities for integration with diverse networks.

The "intrapreneur" finds himself again in a particular position vis a vis the organization that employs him. In a general fashion, the behavior of an intrapreneurial person is described as "deviant"(Alter, 2000), (Hatchuel & al., 2009). The business person is described as relatively independent by (Pinchot, 1985), Bouchard & Fayolle (2011) return to that

concept and consider that the entrepreneur undergoes organizational constraints and must offer proof of certain abilities of organizational and political acumen. Organizational constraints which weigh on innovation have also been studied: beyond the structural aspects formal systems of management. Regulated systems of precise management, regulated by formal and precise rules such as the planning of projects, or again the budgetary system, enter into contradiction with the innovative dynamic of (Romelaer, 2002). These systems actually seek to keep individual actions on track, and look to limit uncertainty, so the innovative process will take advantage of it (Alter, 2000).

1.1.3 Organizational climate and the duality of intrapreneurship

Entrepreneurial project implementation is carried out by two modalities: either by individual approach, by spontaneous procedure (Burgelman, 1983a), or by a deliberate strategy of introduced procedures (Bouchard & Fayolle, 2011). In both cases, the organizational climate is decisive (Carrier & Gelinas, 2011). Definitions of organizational climate have evolved over the course of years and vary according to research. According to models and theories, organizational climate can refer to its culture, its structure, its vision, or mission of the organization. The majority of authors agree on the perceptive and subjective nature of organizational climate. We will define it in a very broad manner as the perception held by the members of an *example* of their organizational context which influences their behavior. Put another way, the ambiance of work, of leadership, of tools of diffusion of information, so that certain structural characteristics (hierarchy, decision making, autonomy, formalism, etc.) could favor innovative activities as a *player* as in a climate perceived as "positive" or as an inhibitor of a climate viewed as "negative".

Spontaneous entrepreneurial processes do not result from an injunction of managerial orders but, rather, come from an individual acting in an autonomous manner (Burgelman,

1983a). The contribution of initiatives for organizational dynamism has been evidenced several times. Among the first authors, Burgelman (1983b) puts forth that new activities derive from spontaneous initiatives emanating from an operational plane and constitute autonomous procedures as opposed to the . Zahra, Kuratko & Jennings (1999) distinguish formal activities which develop in the continuity of existing activities and informal activities initiated by individuals or groups pursuing personal interests.

The implementation of the entrepreneurship through spontaneous individual actions appears in general in situations of "negative" organizational climate. Research which has questioned the manner by which organizations *seek* to integrate simultaneously the prescribed activities with new activities have demonstrated the existence of conflicting logics (March, 1991). Spontaneous entrepreneurial activities seem to give rise to a "hostile" organizational context characterized by an antagonism between managerial and innovational logic (Romelaer, 2002). This framework, considered unfavorable, a priori, to entrepreneurship as constraining, implies that individuals sometimes implement their own projects in a clandestine manner (Alter, 2000), a certain do-it-yourself practice (Andersen, 2008). Entrepreneurial "bricolage", reference Levi-Strauss has, the capacity of improvisation in the utilization of existing resources facilitate performance.

The implementation of the entrepreneurial sector can equally be induced by organizational action. In this case, the organization leans on an ensemble of factors and/or devices allowing the support of individual initiatives. This organizational implication in favor of entrepreneurship expresses itself across diverse designs and degrees. The importance of organizational context rests in the works of the current of "corporate entrepreneurship" where organizational and managerial dimensions weigh in a more direct manner. Entrepreneurship is viewed as an organizational capacity which gains and results

in the responsibility of the organization to develop a "positive" or "favorable" climate in support of individual initiative. These consider that the entrepreneurial sector can equally emanate from a strategy deliberated by managerial processes across entrepreneurial devices (Bouchard & Fayolle, 2011). Organizational context and strategic steering constitute the sources of innovation of the organization.

To conclude, entrepreneurial procedures present diverse forms and varied dynamics according to the behaviors of organizational personnel. The risk-taking of the individual entrepreneur and the organizational climate emerge as two complementary and inseparable dimensions.

1.2 The complex singularity of academic organizations: between autonomy and weak interdependence

How do entrepreneurial procedures play out, more specifically, in the university context? It is appropriate to examine organizational specificities of the university establishment in order to deal with this question.

Universities of the public sector have not escaped the great movements which traverse management on a worldwide level, increasing from the mid 1980s. They are confronted by new realities of diverse nature: the greater volume of higher education; the growth of diversification of missions; the growth of demand for qualification in the work marketplace; shedding light on the contribution of teaching at all ages: a convergence increased by educational service providers at the local, national, and world-wide levels, technological evolutions or modifications of production, and diffusion of knowledge, etc. So much change in institutional context which represents institutional trigger factors in the entrepreneurial process (Zahra & al., 1999).

If the observation of organizational and professional transformations serve as a relative consensus, the reverse, however, the sometimes structural opposition between professional logic tied to individual

auto-regulation and, on the other side managerial logic associated with the hierarchy and collective economic challenge, merits reflection.

The ambiguity of the objectives and the degree of specificity of organizations of the public sector constitute two principal terms of these debates; they lead to two habitual polar visions, one to suggest that problems are present in all organizations and, on the other side, to argue that institutional characteristics render the university a separate category. A grill of interaction of the impacts of innovative academic procedures through relations between individual and organizational and institutional factors allows for reconciliation of the two extreme positions. Such a grill proposes to reread the specificity of university procedures according to a double complexity. The first source of complexity is organizational in relation to weak interdependence, and the second source of complexity is procedural by the negotiated nature of practical and academic changes.

1.2.1 The complex singularity of university organizations: the management of weak interdependence

The analysis of an organization can happen according to at least two perspectives: either as a whole or as a group composed of different components.

In the global perspective of the organization, it often resorts to a model of professional bureaucracy (Mintzberg, 1982) to qualify as university organization. The professional controls his own work, either independent of his colleagues and at the strategic summit, but remain close to his "clients". Professional bureaucracy is a decentralized structure as much vertical as horizontal. The importance of the operational center does not prevent the existence of a hierarchy but reflects the levels of expertise and professional experience. So it is that there exist different status of professionals, with different terminology but, nevertheless, responding to mutual logics in most countries (for example of the United states: Assistant Professor, Associate

Professor, Professor). The model of professional bureaucracy stresses autonomy of professionals and the pursuit of personal or professional interests.

In a "component" perspective of the organization, the university establishment is put into the category of systems which are weakly connected (Weick, 1976). If the principle of weak connection, incompatible with the structure of organizational hierarchy, is denounced or fought, few studies are based on their implications. A system is considered as shakily constructed when its elements do not aim for the same objectives and do not react to the same variables; do not share the same culture, the same ways and/or the same temporality (Weick, 1976). The idea of interdependence is, thus, of paramount importance in forming a system, even though the degree of that interdependence may be variable.

More than the autonomy of professionals, it is without doubt the management of weak interdependence, which constitutes the organizational singularity of the university (Musselin, 1997).

1.2.2 The complexity of negotiated steering of educational changes

In the 1950s, the first research on educational changes were conducted by sociologists of the innovation. The accent was on the transformative procedures of social institutions with an exogenous perspective of change via the approach of new practices or tools emanating from the knowledge of professionals and provoking a syndrome of rejection or acceptance (Huberman, 1973). These works put forth the phenomenon of sequences in educational procedures, by distinguishing individual and organizational change. It must be noted, nevertheless, that the majority of these works are little concerned with the system of higher education.

For research in the science of management, organizational complexity of university establishments translates equally in its processes of change. University

procedures are long and present three different levels: personnel procedures at the level of professional judgment of "experts" in the operational base, managerial procedures at a hierarchal level of decision, and then between the two negotiated levels emerging on the span of corporate choice (Hardy, Langley, Mintzberg & Rose, 1984). The set of the three procedural levels is envisioned by either internal or external diverse sources of influence constituting participants of varying interests. This theoretical modeling has been empirically confirmed by historic works which have demonstrated that the public relations of the university, the courses, the programs, and the activities form the objects of permanent change.

Works concerning innovation of public organizations, and those dealing with entrepreneurship in the public sector, merge in a variety of interests pursued as one of the major dimensions of innovative procedure.

The plurality of participating individuals, both internal and external, of the university, those who each possess their own concept and their own expectations, becomes central (Come, 2013). Traditionally, the French university can be described with a system of research with a balance among three principal types of participants with the influence of power: the State (and all its representatives), university establishments, and academic personnel. Reflection on the manner of both convergence and divergence of these categories of participants becomes major in the procedures of university change where the direction is negotiated (Bouvier, 2006).

Interest in determining the impact of innovational procedures is to suggest that, according to the specific case, organizational implications of initiatives of innovation can differ.

2. Methodological choice: a qualitative analysis of "pedagogical innovations".

Our empirical study is based on a qualitative analysis of multiple cases of "university pedagogical Innovations" which are, each time, new teaching practices proposed by a member of the academic personnel. The solution for a methodical pluralist device for collection of the data, and to analyze those data, is justified by the complexity of our object of research, and has served to shed light upon the entrepreneurial dynamic of pedagogical innovation.

2.1 An interpretive inquiry into university pedagogical innovations

The research design has emerged progressively in the course of research to get rid of a methodological device of empirical investigation based on abductive logic (Pierce, 1931) dialoguing between empirical and theoretical exploration and the gathering of the analysis of the data. The chosen strategy combines several methods of qualitative research. The case method and phenomenological approach are used in a complementary manner. This "pluralist" approach has facilitated the analysis of the evolution of six cases of university pedagogical innovation between 2000 and 2014 in six establishments. In as much as our research pursues the interpretation of procedural phenomena, rather than measuring the variables (Langley, 1999), the use of methods of collection and analysis of qualitative data offers the method of following procedures on different levels and study of the interactions of both individual and organizational factors. The case method, the principal method used, seems very appropriate, knowing that it is considered to be particularly pertinent in three situations: when a) the questions reveal the "how and why" to the researcher, b) when this has little control over events and behaviors, and c) when the social phenomenon is more contemporary than historical (Yin, 2009). The choice made in this procedural study is to retain the innovative initiative as a level of analysis, following a certain tradition in the

works on the procedures of internal organizational innovation.

These innovative initiatives are winners of prizes of pedagogical innovation from the International Conference of Director of Teaching Institutions and Research of Management of French Expression (CIDEGEF). The CIDEGEF is a professional organization made up of institutional networks which work at activities of cooperation in the French-speaking area. One of these activities consists of "support and promotion of new teaching methods". One important part of its activity leans toward the assurance, by itself and in close collaboration with other networks of the Agence Universitaire de la Francophonie, The University Agency of Francophonie (AUF), assistance in the area of teaching, of research, and of administration, to the benefit, in particular, of the so-called establishments du Sud, of the South. In this category, the CIDEGEF has created a prize for pedagogical innovation in the science of management. Five conferences have accompanied the presentation of prizes 2002, 2004, 2007, 2009 and 2011 in different francophone cities. Analysis of the winners of the Innovation prize of the CIDEGEF allows for the benefit of rigorous identification or organizational participants innovative behaviors.

2.2 Methodological pluralism of qualitative analysis

Several methods are used concurrently to gather and interpret data.

Collection of data originates from several sources.

- In-depth individual conversations with each innovator, prize-winner, were brought about in French in face to face or at a distance via SKYPE. Each conversation lasted from 60-90 minutes and was recorded and transcribed. It was the object of a summary submitted for the approval and correction of the interviewee.
- Receipt of Curriculum Vitae on innovators completes the data gathering

- Non-structured interviews were guided by other participants, members of the organizational complex, and identified throughout the procedure by example of university decision-makers technical personnel support, colleagues more or less involved,, etc. They are considered to be part of exhaustive note-taking.
- Activities of non-participating observation also took place in the drafting of memos
- Internal archives have furnished information on organizational context, strategic orientation of the establishment, extension of trails of the diffusion of institutional discourse.

In total, 51 people were interviewed, 13 university "innovators" and 38 members of their organizational context.

Each principal informatory was asked to express on the subject of lived experience and on its result, to specify the subject of actual experience of that result, to be precise as to whether pedagogical is always (still) used at the date of the interview and in what manner, his motivations, his perceptions of progress, the roles of different participants, and the consequences for them and their establishments.

The data corpus includes the transcripts, the corrected resumes, the note-taking, and the archives, have been analyzed according to the categories which have continuously and progressively emerged, and by the use of several two-stage methods. A first stage analysis, phenomenological in nature, and a more analytical and comparative second stage "analysis".

The first stage, based on a phenomenological approach, allowed for understanding of the "history" of each case. The analysis of each case was brought about by continued reading of different sources of data due to a vigilant attention (Dithley, 1995).

The second, more analytical stage, concerns the global treatment of situations. During this stage the appeal of the second method of "Adductive Research Strategy" (Blaikie, 2010)

allowed the release of categories and concepts. The Adductive Research Strategy is close to analysis by an anchored theoretician (Paillé, 1994), while differentiating by priority that the first method joins the senses and interpretations of participants within their ordinary activities. Actually, The Adductive Research Strategy and Analysis by anchored theorization are variations of empirical analysis "Grounded Theory". These two analytical strategies of empiric data offer successive operations, alternating theoretical and empirical analysis in an adductive approach. In addition, Adductive Research Strategy assumes a profound implication of researcher in his area of investigation, by participatory observation and reveals itself to be particularly pertinent in the construction of typologies (Blaikie, 2010). Our own year of university experiments and activities has consolidated the "internal" vision required by this method.

We have thus analyzed the data of the interactive manner at the goal of understanding and qualifying the behaviors of academic participants who throw themselves into the action of innovative initiatives. Certain extracts of verbatim conversations are hereafter used for the purpose of illustration. The six cases of analyzed pedagogical innovation form a heterogeneous group of original behaviors and contexts. These initiatives differ in their organizational content, origin, results and processes. Interviews were stopped when data saturation was reached (Yin, 2009).

3. Descriptive results: the intrapreneurial dynamic of pedagogical innovation in higher education

3.1 The characteristics of academic innovative processes

The first results of case studies are resumed in Table 1. They reveal a complex and dynamic intrapreneurial process.

Table 1 OVERVIEW OF RESEARCH CASES

descriptive characteristics of innovative initiatives	Case	Innovative teaching strategy	Cases	Origin	Nature	Top management attitudes	Difference current strategies	Effectiveness
	A	project-base learning	Curriculum innovation in executive program	Top management induced	deliberate	positive	high	internal used
	B	critical thinking and higher apprenticeships	Apprenticeships and reflexivity involvement	Autonomous involvement	emergent	negative	low	external used
	C	active learning	Curriculum innovation in undergraduate degree	Autonomous involvement	emergent	positive	high	internal used
	D	Experiential learning	Entrepreneurial projects development	Autonomous involvement	emergent	positive	high	external used internal use
	E	Online courses	Optional courses from undergraduate to graduate degree	Top management induced	deliberate	positive	low	external use
	F	Learner-centered	Learning support	autonomous involvement	emergent	negative	low	not used

Pedagogical case innovations studied reveal a non-unidirectional dynamic of interactions between top-down and bottom-up processes. Certain initiatives (A and E) have been project driven following an explicit demand from the direction team, while others (B, C, et F) originate the implication of autonomy of the innovating participant. There are multiple sources. Nevertheless two characteristic principals common to innovative initiatives at the university are observed: a solid intrinsic motivation on the individual level and the collaborative dimensional the organizational favorable or unfavorable

3.1.1 Risk taking and predominance of intrinsic motivations

On the individual level, literature on human resources and authors in psychology distinguish two factors of motivation, extrinsic motivation induced by exterior factors of the individual such as salary, recompense, social and financial advantages, etc. and factors of intrinsic motivation idiosyncratic to an individual, as work ethic, interest in tasks and responsibility, pleasure, etc. Previously

opposed, recent literature demonstrates that these two factors of motivation coexist to produce a creative synergy under certain conditions (Amabile, 1988). Risk-taking and a solid intrinsic motivation are recurrent elements in all the observed cases, whether they are spontaneous or induced, contrary to what might have been expected.

Difficulties are often evoked from either climate or organizational perception. More generally, these innovating initiatives in higher education are described as demanding commitments in terms of time and investment which do not garner direct institutional advantages such as advancements or recognition. It is surprising to find, in the extracts below, that the knowledge of these difficulties does not constitute motivational discouragement.

"My motivation is personal and comes from my vision of the profession, from the role of teaching. It's a personal involvement that takes time." MC of case C

"The organizational environment is not always favorable but I still have the power, this is not

negligible, to be able to do my work well in my courses." BV of case B

In the overview of cases, whether of structural origin of the process and the nature of perceived organizational climate, university leaders of teaching innovations show solid and personal motivations principally emanating from intrinsic elements. Extrinsic motivation, while not absent, is strongly minimized in favor of intrinsic factors. The predominance of intrinsic motivations over extrinsic motivations can be explained by the specificities of university professorial work. The heterogeneity of professional practices, and a certain hierarchy of values, still present, among the three research missions, teaching and administration, in favor of research, render teaching activities *"the poor parent of the university organization"* (Musselin, 2005). Only solid intrinsic motivation can overcome the obstacles in order to transform a new idea into a practical idea. Academic member who develop a pedagogical innovation, in the manner of a champion or promoter, offer evidences of deviant behaviors with respect to the norm (Shane, 1994), and of capacities of perseverance in the face of adversity (Howell et al, 2005). The lack of an incentive framework for teaching activities, comparative to those of publication - do not appear to discourage the people who involve into innovative teaching and wish to innovate.

3.1.2 Pedagogical innovations as collaborative processes

The second observed characteristic is relative to the collective dimension of pedagogical innovations. These cases have revealed frequent, discrete collective procedures, which exceed organizational frontiers.

Highly personal activities at the heart of expertise and autonomy, pedagogical practices of universities are often presented as emblematic of more individual than collective behavior. The results of the study are contrary to these presuppositions and reveal the double collaborative dimension, both internal and external.

The existence of internal procedures of collaboration which cause intervention by various participants, according to different modalities, result in collected statements. The participants can be peers, but also members of technical, administrative services, etc. Collaborative procedures also exceed establishment frontiers by intervention of participants from external environment: business, associations, local communities, public institutions, et al. These results reveal themselves to conform to exiting works which insist on the collective nature of the procedure. The capacity to weave the lines and to integrate the networks allows access to resources and expertise necessary to transform the innovative idea into successful innovation (Burgelman, 1983a, 1983b.) The extract below perfectly illustrates this characteristic: *"Above all I had the support of several enterprises, of several associations of the region which kindly intervened and now are further involved."* AM of Case D.

Pedagogic innovations are further described as appearing as continued and frequent phenomena. So it is less an absence of initiatives, but rather the discretion of the procedures which characterize the evolutionary procedures of university practices. This apparent contradiction of the simultaneous existence of continued micro-changes and quasi-stability, was noted in the works of Mintzberg on university organizations (Mintzberg, 1982), (Mintzberg and Rose, 2003). This author qualifies the university context as being both turbulent and stable.

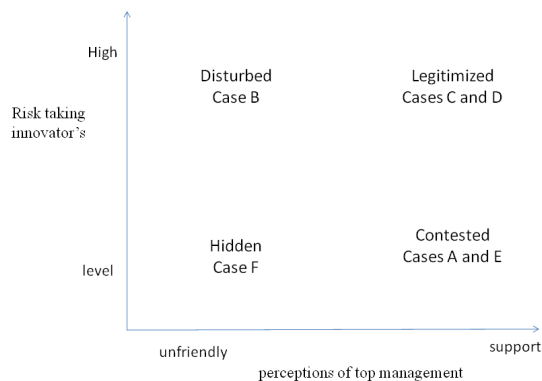
3.2 Variety of types of innovating initiatives process

According to Hatchuel & al.(2009), innovative creative processes develop with, against, or despite, organizational climate. Different situations are found in the cases studied. The organizational climate and risk-taking *stand out as* major dimensions in the explanation of these procedures. The induced procedures develop with managerial support of a favorable context; spontaneous procedures within the organizational climate, sometimes considered to be caring and, at other times,

perceived as hostile. "Hostile" or "favorable" nature of the organization is not directly tied to spontaneous nature or coupled with the procedure, as put forth by theoretical works. The behavior of the pioneering individual faced with risk also constitutes an important factor.

On the organizational level the effects of the initiative of organizational procedure of promotion of new ideas appear in contrast according to the perception of support of direction which can be either positive or negative. On the individual level, behaviors and risk-taking are equally variable depending on the participants. In assessing the degree of risk-taking, with the organizational climate, one can distinguish four types of procedures in Figure 1.

FIGURE 1 TYPES OF INTRAPRENEURIAL PROCESSES



In a favorable organizational managerial climate procedures are viewed as positive factors for innovative procedures or those which cause either organizational turnover or controversy. In a hostile organizational climate, managerial procedures are viewed as obstacles for innovative procedure, that which leads to either divergences or an absence of visible effects. Identified impacts are variable for the university establishment and for the pioneering individual.

3.2.1 Strategic renewal by legitimized

processes

Two case studies offer an illustration of turnover as impact. The two pedagogic innovations, C and D, have voluntary and autonomous engagement of "innovators", fairly elevated risk taking and a favorable perception of managerial attitude on interest and strategic importance of the new idea. In both cases innovating ideas were transformed into new practices at the heart of establishment for C and equally outside of the establishment for D. The purposes which evolve from these procedures are, however, different. The procedures of Case C are rather more internal and the engagement of the decision-makers comes about in a particular manner. Pedagogic innovation D is recognized in the internal and external environment of the university establishment and finds itself to be more institutionalized. In the case of D, engagement of the decision makers is progressively reinforced following the first achieved successes. The external dimension of the procedure previously discussed explains the positive benefits to the reputation of the establishment.

"The university benefits for its reputation and its corporate identity . We won Prizes, recognized by the Minister of Industry, and the Minister of Education. On the national level now one considers us as soon as here is talk of entrepreneurship [..] That has triggered this momentum in an establishment." MA of Case D. Cases C and D are legitimized intrapreneurial processes.

3.2.2 Controversy by contested processes

A and E are two case studies whose organizational impacts relate to controversy. These pedagogical innovations were put forth following a need for direction, and the procedures then benefit from a favorable attitude. Favorable conditions, such as access to access to resources, are present. Nevertheless, these procedures have produced internal conflicts, *"At the heart of my section I had presented my project, people were favorable and that had been outlines that on-line courses are not a substitute for*

courses in the classroom. It is there that it begins to make one grind one's teeth. Certain colleagues thought that that could penalize us. The idea of leaving which was to have courses in the classroom and on line was diverted by the director and the rector. I felt a bit caught up in this game." WM of Case E. The degree of introduced change is relative to a new partially adopted practice. *"It is complicated to change something [...] We do not all see things in the same way."* GN of Case A. The external dimension of the process explains the reinforcement of the organizational reputation despite the absence of total internal diffusion. The cases A and E represent contested processes.

3.2.3 Disparities by disturbed processes

Case B describes a pedagogical innovation whose objectives are different from the strategic orientations of the establishment. Managerial attitude is perceived as clearly hostile. The execution of the procedures has led to clashes between creative proposals and regulatory procedures. Case B constitutes an example of contrary procedure where internal impacts cannot be considered to be positive: *"It's quite a mess"*. BV of Case B. Nevertheless, the individual interpreter sees growth of his reputation beyond the establishment.

3.2.4 Absence of visible effects by hidden processes

The absence of visible effects is identified in Case F. In this case the objectives do not correspond to the strategic orientations of the establishment, managerial attitude is also perceived as hostile. Less risk-taking on the part of the project leader has continued the confrontation. Discretion thus appears to be an intended strategy toward the goal of concealing the differences in objectives: *"In the paths which I take I pretend. I stir the principles so they conform to the directives of the university."* PA of Case F.

The organizational impacts, even though invisible, are not necessarily positive: diversion of resources, lack of confidence, latent

conflicts, frustration for the innovator, etc. The process is hidden using bootlegging.

Discussion and conclusion

By examining innovative teaching practices in university, we have attempted to enrich our understanding of the dynamic of innovative processes in academic organizations. Innovative initiatives seem to be similar to the bottom-up or top-down phenomena of opportunities' screening. They produce impacts both for academic personnel and for the university establishment. Innovative and recognized initiatives are sources of personnel satisfaction and of reinforcement of reputation while the ignored efforts remain hidden. Nevertheless, the transformation of these beneficial impacts to the reputation of the university organization is neither automatic nor systematic. On the contrary, depending to the managerial behavior and the degree of risk-taking, they can even produce negative organizational impacts, sometimes visible as, for example, in situations of misappropriation of resources, lack of confidence, undeclared conflicts, and sometimes more repairable when the initiator is forced to leave the organization. The results allow for the qualification of emerging innovative procedures within the university context of entrepreneurial procedures. In the literature of key organizational players, entrepreneurs take risks and surmount obstacles and resistance in order to transform an idea into an innovation or a change beneficial to their organization or environment. Managerial practices, in a more or less indirect manner, influence the conduct and the results of these procedures.

The paper makes three contributions. First, it appears that the procedures of pedagogic innovation demonstrate great diversity in both nature and results, according to the behavior of both individuals and organizational climates which can constitute either an obstacle or a factor favoring creative and innovating processes. Spontaneous procedures are not systematically prevented, and induced processes do not systematically lead to

success. Innovative processes in universities reveal themselves to be heterogeneous with varied trajectories.

Second, the study proposes a description of innovative pedagogical processes which integrate a socio-political dimension. By discerning two lines, innovational behavior and managerial attitude toward the innovator, it is possible to distinguish four categories of procedures according to organizational impacts:

- a hidden process with internal negative effects for both establishment and professional and without external effects;
- a contested process with external positives for the establishment;
- a disturbed process with external positive effects for the professional;
- a legitimized procedure with positive internal and external impact for both establishment and "innovator".

The few previous categories proposed by pedagogical innovation don't analyze their impacts and their evolutions within the organization and are annexed to the "technical" dimensions such as the content of pedagogical innovations (Hannan and Silver, 2000) or the structural tracking of their origin (Bechard and Pelletier, 2004).

Third, the pertinence of considering the influence of managerial practices on the performance of university procedures seems demonstrated. The university establishment can profit from the initiatives of academics under certain conditions. Managerial and professional logics incorporate.

Our results seem able to maintain consistency with existing works while furnishing a complementary comprehension of intrapreneurial procedures. They render empirical elements to the fact that the constraints of management are not all obstacles to innovation. Certain ones among them are circumvented by participants to be brought to the fore by having recourse to entrepreneurial methods (Romelaer, 2002). The variety of commitment of direction, which can manifest itself in indirect manner by

statement and attitude, or in a direct fashion by allocation of resources to entrepreneurs, has been emphasized (Bouchard et Fayolle, 2011). Likewise, the engagement of the intrapreneur, measured by the degree of risk taking, can vary considerably (Allali, 2005). Nevertheless, this research does not deal with the effects of this dual variety of entrepreneurial procedures. Our research, relying on the two questions, treated separately until now, can help to enrich the comprehension of the impacts of entrepreneurial procedures. Concerning the contingency of organizational impacts, Covin and Slevin (1991) showed that entrepreneurial behavior is not always appropriate. It would be judicious with a positive impact on the organizational performance in the case of a hostile or unstable environment and an organic structure. However, if the empirical study of these authors questions the importance of the variables of organizational structure, of the style of management and of the type of environment, it offers few comments on the roles of individuals involved in intrapreneurial processes, what we have attempted to do.

Our results conform to the highlighting of the paradox which prevails around the notion of entrepreneurship mixed, at the same time, with autonomy and structure (Rojot, 2003). On the theoretical level, intrapreneurship is an innovative and important concept for managerial practice. This concept may constitute a track toward the solution to the permanent managerial dilemma between the need of innovation and the necessity for organizational structures of coordination (Rojot, 2003). In demonstrating that the intrapreneur can act with or without the consent of the top direction of the university through induced or spontaneous innovative initiatives, this study suggests that integration and selection of innovating proposals are strategic issues. One can notice that all innovative initiatives do not produce the same effect, in either nature or intensity. To allow individuals too much latitude in the innovation of the organization can cause development of a global coherence and reversal, ignoring innovational proposals in such manner that

the organization can scarcely function in the detection of hidden procedures. On an empirical plan the procedural analysis of Ropo and Hunt (1995), on the emergence of entrepreneurship as an organizational adaptation in two Finnish Banks, demonstrates that the results of an entrepreneurial procedure can result in success in the case of spiraled virtues of convergence, or in failure in the case of vicious spirals of divergence. For our part we have shown evidence of the development university spirals of both convergence and divergence as organizational behaviors.

Our research can also offer the distinction of applying the entrepreneurial concept, a home-grown as approach to innovation, to contexts other than for-profit organizations. Our results suggest that the management of intrapreneurship would serve to integrate factors of intrinsic motivation as satisfaction in work or involvement.

Intrinsic motivation is a generally minimized element in the analysis of corporate entrepreneurial management at the heart of businesses which stress systems of recompense and extrinsic motivation as factors of employee involvement (Jarillo & Stevenson, 1990).

Research in management dedicated to establishments of higher education often collides with the diversity of organizational forms and methods of operation. Neo-institutionals are generally set forth to deal with organizational and collective dynamics in the academic context. Our results remain coherent with the neo-institutional perspective and complete more recent orientations which place the accent on procedures of change by integrating organizational structures and strategies (Washington & Ventresca 2004). The first works stressed the "iron cage" and the constraining nature of reverse institutional pressures (Di Maggio & Powell, 1990). Recent studies of neo-institutional literature reinforce the idea of institutional supports of organizational change as analytical framework alternative. It is thus that in their study of new

strategies of visibility of universities, Washington and Ventresca (2004) propose a vision of change as appropriation in opposition to the traditional perspective of change as isomorphism.

In addition, in the university context innovation is frequently addressed by its single technological dimension and management of innovation often limits the management of research. Our statements differ and look to analyze every innovational practice, tangible or intangible. The procedures by which higher level teaching organizations can integrate and harness local projects of their professional members represent a definite challenge for their strategic policy. Better to understand the mechanisms by which the practices of professionals evolve from local initiatives, can also allow better articulation of the intention of public powers in the matter of educational systems, political strategies of the establishments and activities of the university systems themselves. Our results suggest that the capacity to integrate the creative processes of the members of the prime organization on the conditions necessary to their generation. Public entrepreneurship, as such, is equally a promising path of research (Sadler, 2000) since the study of emerging procedures in the sector of public service has long been neglected (Windrum, 2008).

Generalization of such results would be managed with caution given the limitations of our research. Methodological limits are found, above all, in the use of a single method of case-study which doesn't permit statistical generalization. In addition, the somewhat limited number of six analyzed cases must also be taken into account. Another, more conceptual limit resides in the bias of limiting principal participants of initiators of innovative concepts, to the detriment of the perceptions of others, such as students, or direction and steering or institutional participants,

Finally, the study of innovating initiatives of academic professionals in educational organizations highlights the complexity of implementation and generalization of new

university practices and the necessity for further researches.

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