

Vocational Training in France: From the Margin of the French Education System to a Laboratory for its Renewal

Formación Profesional en Francia: las regiones como laboratorio para su renovación

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ABSTRACT

According to specialists on Education, the French National Education system is affected by a significant institutional inertia: despite a fast changing environment and considerable efforts to reform it, its foundations seem to remain very hard to change. In this contribution, we depart from a national system perspective, and rather look at some experiments going on at a very local and idiosyncratic level of two representative French regions in the vocational training area. On this scale, and in this area, educational innovations became visible. If some of these experiments would become generalized and legitimized, they could represent interesting seeds of change for the future of the French Education system.

Keywords: National education systems, Vocational training, Institutional inertia, Transition theory.

RESUMEN

Expertos en el sistema educativo nacional francés han alertado de la existencia en el mismo de una importante inercia institucional. A pesar del cambiante entorno y los reiterados intentos por reformar el sistema, sus fundamentos se mantienen firmes y resistentes al cambio. Sin embargo, al desplazar el foco de análisis desde el núcleo del sistema nacional hacia algunos casos de experimentación de nivel local o regional, en concreto en el ámbito de la educación profesional, es posible detectar algunas innovaciones interesantes. En este artículo se analizan experiencias procedentes de dos regiones del sur de Francia, que pueden considerarse representativas del proceso de descentralización. Se sostiene que la generalización y legitimación de experiencias de este tipo podría ser el motor de cambios de mayor calado en el sistema educativo francés.

Palabras clave: Sistemas nacionales de educación, Formación profesional, Inercia institucional, Teoría de la transición.

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INTRODUCTION

The French education system trapped in a strategic drift

The education system has recently been the target of a wave of reforms in France: Continuous training for employees (National Law of the 5th of March, 2014), general education reform (National Reform of the 'Middle School' of the 10th of April 2015) and vocational training (National Law of the 5th of March 2014). High schools and universities were also subjected to drastic reforms; respectively in 2010 and 2007. More broadly, attempts to deeply modify the French education system can be traced back to the 1980's, when the policy makers realized that the reconstruction, full employment and continuous growth period that followed WWII was over and that new challenges were to be addressed.

Considered as very efficient during the post war period, the French system of education has indeed attracted increasingly more criticism from the 1980's on, as many observers consider it failed to adapt to a brand new economic and social context; triggered by global multi-polar competition, mass unemployment, fast evolving technologies and low growth.

This lasting discrepancy has been confirmed by independent international research agencies. For instance, the French system of education has consistently ranked poorly—compared to its economic rank—by periodic OECD surveys and seems due to deteriorate further (OECD, 2009, 2012, also INSEE 2014 for a European comparison). Not only did the reports point to the difficulties France faces in reforming and adapting its education system as compared with other OECD countries, but it is equally pinpointed by international observers as particularly unfair to low social status students (OECD, 2012).

Such enduring institutional inertia, in spite of numerous waves of reform to alter it (Prost 2013), and its resulting ever increasing gap in addressing contemporary educational challenges, is puzzling. Such situations of blockage; have been labelled as 'strategic drift' in management sciences (Johnson, 1988; Romanelli et al., 1994). They are situations in which 'gradual deterioration of competitive ac-

tion' often associated with perseverance with past successful behaviors, tend to 'fail to acknowledge and respond' to evolving environments and changing stakes (Sammut-Bonici, 2015). The question is then why is the French system of education so hard to change and adapt to novel pedagogical norms? What are the levers that French policy makers could use?

Framing the issue using an institutional conceptual framework

To understand what could be the possible pathways towards adapting the French Education system, we believe a theory of institutional change is required. Accordingly, adapting the French education system might be seen as a 'dynamic institutional process' (Mathews et al., 2010). This implies that the sources of institutional inertia need to be understood. New institutional theory offers interesting insights into why and how institutions resist change (Zucker, 1977; March et al., 1984; Mahoney, 2000). In particular, they show that policymakers are faced with institutionalized agencies, established actors' power, rules and norms serving to maintain the status quo and produce resistance to change. Those 'conservative' forces might form the basis of a detailed study, if we are to understand why the education system is so hard to change.

Complementarily, the question of how institutional inertia can be overcome is of relevance. New institutionalism again offers an interesting theory to understand how and why this happens (Vasi, 2007; Wijen et al., 2007; Battilana et al., 2009; Fligstein et al., 2011). Of particular interest is the perspective provided by the theory of transition (Grin et al., 2010; Geels and al., 2007). The question addressed here is why some desired innovations and changes fail, while others succeed. That is how some innovations and practices become general and institutionalized and replace previous rules, institutions and practices, and how in turn they become able to maintain this regularity and create institutional inertia. It is in this context, that due to institutional inertia mechanisms, innovation and change most often develop at the interstices, in protected niches characterized by favorable local conditions. It emphasizes situations of freedom, protected spaces or

niches in which actors can conduct trial and error experiments.

Vet in France as an experimental niche of interest

VET recent reform in France, has been to a large extent associated with the more general and longer context of 'decentralization', aimed at empowering French Regions and giving them increased authority on economic and educational matters. It represents an experimental niche of interest, in the sense of the theory of transition, with the potential to achieve local change of the institutional situation.

Vocational training appears as an interesting mechanism for French policy makers, following the example of Germany and Switzerland where vocational training is a cornerstone that efficiently bridges industry and education. These countries' experiences have largely demonstrated how vocational training could succeed in easing the access of students with low academic profiles to employment and lifetime social mobility (OECD, 2012; Delautre, 2014; Institut Montaigne, 2015).

While the strength of general education, is deeply associated with the ability to centralize and normalize the quality of education in different places and with a large cross section of the public (Gradstein et al., 2004), vocational training, like continuous training performance, rely to a large extent on the ability to govern local adjustments between a variety of actors, particularly between education agencies, professional and trade associations, local companies, and local authorities, through the hybridization of academic and professional training. In other words, it invites actors to adopt local conventions and norms that depart from the national education system.

In order to study how French regions have been seizing the opportunity of the VET reform to adopt new rules and practices, we have investigated two regions with representative profiles as regards their education systems, namely Midi-Pyrénées and Aquitaine. In these two regions, we have been investigating representative cases, in which vocational training has been implemented to observe local institutional change vs inertia. Results of our findings are then discussed in an exploratory conclusion.

THE FRENCH EDUCATION SYSTEM AND THE SOURCE OF ITS INSTITUTIONAL INERTIA

National education systems have long been identified as an important contributor to the national economy (Freeman, 1988). In his seminal book about the sources of the wealth of nations, Adam Smith already considered the education of citizens as a crucial source of prosperity and a basis for value added exchanges, as well as a fundamental pillar of democracy (Smith, 1776).

Inherited from the 18th century enlightenment and the French revolution's democratic values, the French education system contributed very positively to support the post-war period of economic and social reconstruction. On the one hand, teaching had to take the most recent and legitimate developments of science and technology into account. On the other hand, education had to be controlled and financed by the central state to ensure that every citizen would have access to the same universal and certified knowledge and then through a state certification and degree, be qualified to take his/her place in society (Prost, 2007). This model seems to be less adapted to the multi-polar, low growth, fast changing technology context emerging since the 1980's. Efforts to reform and adapt it have encountered considerable institutional inertia.

In the chapter below, we are reviewing two conceptual frameworks that have contributed to analyzing the sources of such inertia.

The French education system in the eyes of structural anthropology

D'Iribarne has analyzed the sources of the persistence of the French system of education and its ability to resist attempts at reforming it from the viewpoint of structural anthropology. This perspective contends that institutions are based on shared values and principles, formed over a long term collective history and tend to become durable as they relate to national identity and culture (Iribarne et al., 1999).

According to the authors, the French system of education is quite singular. It is fairly centralized and controlled by a public ministry, represented in the regions by rectors. It is fairly academic and universal,

in order to bring the most recent science and technology to students. It is free for every child from every background and in all locations (even mandatory before 16) and financed by income tax. It is aiming at raising the general level of education of citizens to a high standard and provide the country with competent people. On the other hand, the education system is responsible for discriminating against the most talented children, on the basis of their academic merit and to rank and distribute them accordingly to different types of professions and status.

D'Iribarne notices tensions between two contrasting perspectives, labelled 'democratic' vs 'elitist' (D'Iribarne et al., 1999). The foundations are based upon egalitarian access to education and edifying each citizen through the prism of science (mass-production of citizens for the republic), however, as it became absolutely central to the allocation of social positions, it is at the same time fundamentally leading to segregation (limited to the production of an elite).

These deep foundations, translated in enduring educational and labor market institutions, explain why France is regularly doing well regarding high level academic profiles, but faces critical difficulty in educating and training students of low academic profiles: each year, about 15% of any French student's academic year, leave school without qualifications and with very limited prospects of finding a job (Ministry of Education, 2015).

Another consequence of its application and its success, is to relegate children who do not conform, or whose talent is not of an academic nature to a lower status and to select children with a strong academic inclination as 'the elite'. And in practice, this is based on education standards favoring students of higher cultural and social origin (Baudelot et al., 2009; Dubet, 2014; Duru-Bellat, 2002). It would then be understandable that vocational training, as the trailblazer for an alternative pedagogical norm, has been to a large extent relegated to a marginal position so far. This confers on the VET reform, an important role.

Educational ranking through titles and degrees guaranteed by the States— a representation of the national interest— would provide an agreed upon equivalence to social status and professional po-

sitions. As a result, the French education system was meant to contribute to the production of a fairly stratified society, where continuous training and non-academic certifications have a limited impact.

One interesting observation, is the outstanding stability of this system over the long term and even its accentuation (Dubet, 2014). Thus, beyond its functional efficiency of educating and allocating children to professions, the national system is deeply embedded in society and conveys important cultural and political dimensions, inherited from long years of French history.

The societal dimension of education: Competence and social stratification

Another interesting perspective on the French education system's institutional inertia, has been provided by the school of the 'societal effect'. This school emphasizes the role of the overall correspondence in a given nation, between the education system, industrial organization and the labor market. This overall consistency, and the necessary institutional work through which it is constructed, represent, according to the authors, a source of institutional inertia.

International comparisons of education systems, have revealed that such an organization of the education system, is far from universal (Koch et al., 1998). Some countries like France, seem to have opted for a highly centralized education system, in order to certify the normalization of qualifications and people (Campinos-Dubernet, 1998), while others are organized in a much more de-centralized manner, like Germany, where regions pilot and finance education to a large proportion of the population (Möbus et al., 1997). On the other hand, some countries have chosen to rely mainly on public schools and national public funding while others rely extensively on private schools and private money.

The school of the 'societal effect' has demonstrated that each element of qualification and education makes sense inasmuch as it is situated in a consistent system of employment, professions, organizations, and governance (Maurice et al., 1984). What matters here, is the coherence of the system of education within the system of employment and organizations. For instance, in Germany, qualifica-

tions refer to the mastery of current practices as they are carried out by professional communities of reference. In France, qualifications are certified by the State through degrees, codified knowledge, titles, which in turn provides an access to a codified social status.

Therefore, this explains why the notion of management is so different in the two countries (Hofstede, 1993) and why lifetime mobility through continuous training, is usual in Germany (for instance for updating or upgrading mastered practices and knowledge), while very limited in France, where the initial degree obtained and the highest academic level certified, provide lifelong social status and ranking in society.

This would also explain the substantial stability of the national education system in France. And indeed, when a reform is targeting schools, what is at stake according to the 'societal effect' perspective, is not only school, but equivalent changes in the employment system and in the system of industrial organization. In this respect, changing the education system entails more than changing a program, or training teachers in a different way, since the coherence of the whole system relies on a series of negotiated agreements between different actors, a set of rules on who is negotiating and how, which in turn leads to a whole set of long lasting agreements and regulatory practices that need to be displaced.

VOTATIONAL TRAINING REFORM AS A POSSIBLE SOURCE OF INSTITUTIONAL CHANGE

The previous chapter reviewed analytical perspectives, explaining the specificities of the French education system and its institutional inertia. In the following chapter, we use new institutional and transition theories to predict that changes would come from local experimentations. First, we review the potential of recent VET reform in France in the context of generating opportunities for local experimentation, thus becoming interesting observatories. Secondly, we describe 4 case studies undertaken in two French representative regions, in which local institutional change could be observed.

Professional and vocational training as an experimental niche

As we have seen, changes affecting professional and vocational training are interesting in terms of studying the evolution of the French National system.

In a national education system, which values academic performance and codified knowledge, professional and vocational training appear of secondary importance as compared to general education. It also means that children that fail to perform in general education activities, tend to be channeled towards professional and vocational training. As a result, professional and vocational training tracks, tend to account for a large concentration of low academic profile students. This in turn contributes to a lowering of the prestige of these training tracks and the associated trades and jobs for which they provide qualifications.

From our perspective, this is the reason why it is interesting to study this area. As professional and vocational training agencies are attempting the precise handling of these situations and profiles, which constitutes the weak point of the national education system, so they are, we believe, the very area where improvement and innovation could come from and be observed.

In addition, it is interesting that the success and performance of professional and vocational training in enhancing the integration of low academic profiles into the employment system and creating upward mobility, requires a mode of coordination of actors and practice that differ significantly from the one at play in general education today. Success in this matter, relies upon the ability to govern and drive local adjustment between a large variety of stakeholders—educational agencies of different kinds, professional and trade associations, large and small local companies, local authorities and chambers of commerce, contrasting sharply with the well-coordinated, expert based, simplified world of general education.

Finding common ground, easing mutual adjustment between actors, favoring the search for local agreement and compromise, combining divergent legitimate interest and perspectives, have the potential to lead to the hybridization of practices and

competences of professional and academic perspectives and resources. This mode of coordination certainly is not best suited to deliver universal and large scale solutions. But it is, we believe, efficient at the local level, in the search for idiosyncratic and genuine practices.

In recent reforms, the governance of vocational training has been increasingly left to regional authorities. At this level, the State Ministry of 'National Education' (as French call the ministry of education and its public agencies), is represented, but is just one actor amongst others.

Consequently, we make the assumption that on the regional level, it could be an easier context to start renegotiating established agreements between the different actors. In other words, at this level, local agreements could be found that would not necessarily call into question the general coherence of the French system. The result is that it could be a favorable place for experimentation and innovation, and may allow local actors to seize the opportunity to induce some local change to the national 'universal' framework. This assumption will be tested in the following chapter, in which we describe our investigation into two French representative regions, Midi-Pyrénées and Aquitaine.

Two cases in point: Midi-Pyrénées and Aquitaine

Midi-Pyrénées and Aquitaine are two neighboring regions in the south-western part of France. They both enjoy good general education and higher-education agencies, especially in their two capital cities, Toulouse and Bordeaux. They have historically enjoyed traditional economic activities (agriculture, wine, textile, energy, and tourism) and more recently clusters of high tech industries such as health, aeronautics, and ICT.

So networks of local actors such as companies, professional associations, chambers of commerce, but also academic and research networks, are well constituted and active. They are, in other words, two regions that are considered representative of the French situation (Ministry of Education, 2015). During our study, we discovered a rather comparable variety of actors and both regions were involved in experimenting with professional and vocational training.

Our study consisted in collecting material from three main sources: the media inasmuch as they reflected initiatives and experiments going on at the regional level, contextual documents about regional education systems in the two regions, including economic and employment reports and statistics and finally, a series of semi-directive interviews were undertaken with key actors, including local authorities, regional representatives of 'national education', professional associations and training centers, which resulted in 4 'cases studies'.

VET REFORM LOCAL EXPERIMENTS SEEN THROUGH FOUR CASE STUDIES

How did local actors profit from the opportunity opened to them by de-centralization? To get into a more detailed analysis, we found it worth picking a handful of innovative local experiments, that we could observe in the Aquitaine and Midi-Pyrénées regions. We have ample evidence that other regions in France, based on their own local socio-economic landscapes and their unique industrial traditions have done the same. So even though each of the initiatives presented is somehow singular, they are representative of a number of comparable initiatives that have taken place in the French regions since the de-centralization movement opened a window of opportunity to do so.

Two cases in the Midi-Pyrénées region

LYCEE AIRBUS One example of hybridization and local experiment, is the so called 'Lycée Airbus' (Airbus High School). The European plane maker, is the major employer and source of economic growth and wealth in Midi-Pyrénées. In an original way, local representatives of the ministry of education and the Airbus company, have agreed to jointly work at setting and running an 'Airbus High School'. From the perspective of the dominant normalizing, centralizing, and public perspective, the adjunction of these two words, a public high school and the name of a singular private company seems outstanding and iconoclast.

The high school is private and belongs to the Airbus company, a European corporation. It is on the

one hand, a service displayed on the Company organizational chart. On the other hand, a high school approved by the state, which certifies the degrees delivered by this establishment, as it does for any other public general education highschool.

In this unique experimental setting, started in the 1990's, a combination of academic courses and professional training, were proposed to students. Academic courses are taught by 'general education teachers' employed by the ministry of education, to about 300 students. Professional training is taken care of by Airbus professional employees. As the Director of the school puts it, 'we live with people coming from two separate worlds' (Interview with Airbus High School Director).

Starting with the most basic level of professional certificates in the 1980's (CAP, BEP), the high school gradually developed higher degrees in the 1990's (Bac Pro) and extended it to higher education professional degrees (BTS certificate of Superior Technician, two years after high school). Professional and vocational training cover the four basic professions involved in the production of planes: hard metal working; fine metal working, mechanics and electricity. Programs are elaborated jointly and continuously reshaped, to match the evolution of professional activity: new methods, new materials, novel competences and equipment are integrated. Strong relations are maintained with the internal continuous training center of the company, to make sure competences taught and practices are aligned.

The content of degrees are translated into their equivalent competence building blocks on the job. The correspondence produced here, connects the two worlds of learning and acting, acquiring skills and competences and being given an access to the job and status where these competences will be employed. At the same time, the same degrees comply, on the academic side, with the disciplined references of the national education system.

*ENSEEIH*T A second example is the development of an apprenticeship in ENSEEIH. The ENSEEIH school, is a general education school, with high academic standards and a disciplinary organization. Situated in Toulouse, the fourth largest metropolitan area in the country, it is a 'temple' of the 'national

education' elitist tradition, as its name indicates (ENS stands for NATIONAL SUPERIOR SCHOOL). The school is part of a network of NATIONAL SUPERIOR SCHOOLS, a group of about 20 engineering schools, often specialized by discipline, which are ranked amongst the very best of the country, even though a ranking system does not officially exist. The disciplines taught and researched at ENSEEIH, are described by the last part of its name (EEIHT defines the disciplinary specialties and applications - here Electro-technics, electronics, hydraulics, computer sciences and telecommunication).

In the last few years, thanks to a favorable governance provided by the Regional authority, a strong demand by companies, and local initiatives at the school, several high level degrees were offered for apprenticeships. The idea was to deliver degrees (and the associated prestigious Grandes Ecoles engineer title), strictly equivalent to the ones obtained through the elite 'general education' track.

By so doing, on paper, the school created a strict equivalence that connects two previously separated worlds. It designates as equal, in terms of degree and title entitlements, students that have passed through the general education elite path and students that have passed through the dual system of school academic courses and the on-the-spot training of local companies. To date, three such tracks have been created (engineer in information and communication technology; engineer in electronics-electricity, engineer in fluid mechanics).

To fully explain what it means, it is useful to mention the way the 'general education' track is organized. Best students of the best high schools of the country, are entering a national competition; in order to gain entry to so called preparatory classes. Once successful, they are submitted to highly intensive academic teaching of a mainly theoretical nature, like theoretical physics and mathematics by the elite professors of the top ranked high schools. After two years of this intensive regime, they take part in a national competition with others students of 'these preparatory classes' and get a ranking. The top ranked then choose their schools (each school has a limited number of seats). The highest ranked schools are the most pure 'general education' players.

Students enrolled through the apprenticeship track, have usually missed elite tracks, or had academic results at high school that did not qualify them to enter preparatory schools. In such cases, national education policy, channels students through more 'professional' tracks (BTS and DUT, meaning, usually two years of higher education after high school). In addition to being amongst the best students of these 'professional' tracks (especially as regards general education and theoretical teaching), students have to find a job in a company, this mission of being consistent with the ideology of preparing for an engineering degree at ENSEEIHT, if they want to qualify and pass the selection test to enter the school.

Another key aspect of the correspondence built by ENSEEIHT, is between different pedagogical approaches. By and large, the general elite education path, is based more on a higher level of general education and a disciplinary organization. The apprenticeship track proposes a mixed system of a lighter version of the general education track, plus periods of on the job training in the company (Interview with an ENSEEIHT Program director). Competence building is subjected to individualized follow up, tracked in an apprentice booklet, supervised by a team of one academic tutor and one master of practice from the company, who both have to validate the training and therefore its equivalent level together.

Two cases in the Aquitaine region ***L'aerocampus Aquitaine***

In 2014, a training center, belonging to the French Army, was bought to establish a unique center in France dedicated to all the maintenance jobs in the area of aeronautics. The Aquitaine Region funded more than 70% of the operation and was driving force behind its creation.

This initiative is closely related to the importance of the aeronautics industry in Aquitaine (with Midi-Pyrénées, Aquitaine shares the status of being one of the few World Aeronautical Industrial Clusters - called Pole Aerospace Valley). Professional Training (AFPA, APAVE, AFPE) and education organizations were also closely associated (schools, universities).

As a result, Education and training are offered in a large portfolio of different paths (professional and apprenticeship, continuous training) for the different jobs involved (blue to white collars). Qualifications are offered to comply with both professional and academic expectations (aeronautics, avionics, metal working, electricity and a number of professional certificates specific to the industry).

A number of collaborative such training certificates and degrees have been created as a result of this partnership with existing actors, such as the Painting, the Welding or the Sticking Institutes of Aquitaine. For instance, in 2012, a degree of technician in aeronautics (apprenticeship) was created as a link to the existing university higher education degrees (Aeronautics Maintenance Institute) in order to offer a full path of education and training to highly motivated apprentices. A similar action was taken in partnership with Toulouse National Civil Aviation School (national 'Grande Ecole') to create a path for apprentices towards a high level aeronautics operating technician degree.

Another domain of hybridization is the material dimension of training. In addition to rooms and classrooms that a traditional high school would offer, here, the technical platforms also comprise quality infrastructure and material in line with those currently used in the industry, like planes (engines, planes), workshops (Co-working spaces, virtual reality, flight simulator), and labs.

Centre de formation d'apprentis Aquitaine ***(Centre for Vocational Training Aquitaine)***

CFAI is a global training institution created by the French Metal and Mine Federation (IUMM) in Aquitaine. IUMM is one of the most active industrial federation in France. One interesting initiative taken under this global umbrella, is the establishment of the Institute of Engineering Technology in Industry (ITII). This Institute, belonging to a national network of regional entities, is aimed at developing training and education in engineering through the path of apprenticeship and continuous training. This is done in close partnership with existing engineering schools and universities.

CFAI Aquitaine is offering training (apprenticeship) in a number of careers like maintenance, opera-

tion, metal working, aeronautics or ICT. The objective is to open new possibilities to young people between 16 and 25 years old, taking into consideration their professional objectives, as well as the local needs of the companies in Aquitaine in this sector.

Coordination is carried out in good part by 'developers of industrial apprenticeships' whose role is to bridge the industry and the apprentice worlds in a fairly operational manner: they establish networks of companies, define their needs, contact potential students and their families, discuss their projects and help them file an application and establish a contract with a relevant company.

The first year of operations demonstrated high efficiency, with almost 85% finding employment following the end of the training.

CONCLUSION

The French system of National Education, is particularly efficient and good at promoting a high academic profile, whatever the social origin and the geographic location, into an elite that is structuring the employment system, providing coherence to organizational arrangements and to a certain extent, promoting values that are largely shared nationwide, on ranking people according to their academic success and based on 'scientific' criteria.

The weak side of this dominant perspective relates to its very poor ability to take care of low academic profile students, to train them properly and help them develop their skills. Another side to this temptation for abstract and universal conformity, is the difficulty to adjust educational programs of a general and theoretical nature to the technical and social skills valued by employers. As a consequence, a large number of students are left out of the education system without benefiting from proper training, and have the utmost difficulties in finding their way into the labor market.

As Bourdieu (1979, 1990) already demonstrated in the 1960's, in spite of its claim to egalitarian values, it seems particularly unfair to students coming from poor social origins. But the persistence of this characteristic over decades, as compared with other OECD countries, is intriguing.

To understand this long lasting effect and the difficulties to reform the French national education system, we referred to new institutional theories that explain institutional inertia. Applied to the French education system, we found two research works of interest in addressing the sources of inertia. D'Iribarne et al., who have shown that resistance to change would come from its institutional entrenchment in the French national identity and shared values and culture (d'Iribarne et al., 1999). This dominant system of interpretation offers an explanation of the relegation of vocational and professional training to a very secondary role in the education system in France. In turn they lead to the less qualified and attractive jobs, and to positions considered less 'honorable'.

The second, the 'societal effect' theory, emphasized the importance of consistency and correspondence of the education system, with the employment system and industrial organization, relying on a complex institutional work of negotiation and agreement. This explains why education would be deeply interdependent on other national arrangements, making any change at the national level difficult. These two theories predict stability over time and difficulty in departing from this societally embedded and culturally produced education system.

Drawing on new institutional and transition theories of change, we posit that innovations would require protected niches where local experimentation could occur. We found that the combination of recent energetic 'de-centralization reforms' and the political intent to promote vocational and professional training in the French Regions, might represent such a situation.

To test this prediction, we studied four cases in two representative French regions, to determine if we could indeed identify interesting experimentations, that could represent seeds of change.

Indeed; we found that important local institutional innovation to have happened in our four cases. First, as noticed by many observers, VET seem to favor more local forms of mutual adjustments between a variety of actors, including those in education and in industry. Secondly, as regards students with a low academic profile

and access to qualifications and employment, our case studies seem to be consistent with larger comparative studies, and confirm good performance. International comparative statistics tended to show that vocational training in France, would mainly prepare students to get a job in small businesses (Institut Montaigne, 2015). Our case studies seem to show that this could evolve to include more jobs in medium-sized and large businesses. Thirdly, part of our case studies have shown that VET reform might also temper the most elite *Grandes Ecoles*, by opening them to a novel audience and a larger variety of students. Recent statistics show a significant movement in this direction in recent years (Institut Montaigne 2015 shows higher education degrees jumped from 7% of VET in 1996 to 31% in 2013).

Recent developments in transition theory, show how local experiments could play the role of catalyst in more systemic and societal changes (Geels et al., 2007). In our cases, one interesting element is the spread of VET in elite schools in France. As we have seen, for a long time, VET was perceived as mainly adapted to students of very low academic profiles. This has obviously changed in recent years, with VET appearing more directly as an alternative pedagogical norm and practice.

If local innovations are observable, our survey is too limited to address the wider question of the possible institutionalization of the innovative practices we observed. Mechanisms through which such local innovations could be generalized and institutionalized, are we believe, an exciting research program for the years to come.

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