DIALOGUE project

Relationship between Research and LLL

Working Group: Learning and Guidance

Case study proposed by the University of Versailles-Saint Quentin en Yvelines (UVSQ)

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I - Framework

Research and Education constitute in France two fundamental missions of the University, which were specified and supplemented by the Law "Freedoms and Responsibilities for the Universities" of August 10th, 2007, France (LRU Law, article L 123.3). More precisely the missions of the university defined by the LRU Law are:

- Initial training and lifelong training;
- Scientific technological research and the dissemination and the valorization of its results;
- Orientation and professional insertion;
- Dissemination of culture and the scientific and technological information;
- Participation in the construction of the European space of higher education and research;
- International cooperation.

This evolution in the missions shows that we leave the traditional model of the university to develop a more open university on society.

In the traditional approach, the university as an essential social institution, is regarded as a place relatively closed and folded up on itself; this is the place of science and reason dedicated to the reflection and the critical analysis to develop the knowledge and to transmit it to students. The new approach consists in widening the missions of the university by the construction of an opened institution, becoming an essential territorial actor, to accompany the individuals in the building of their life trajectory and thus to develop the citizen participation contributing to the evolution of society. The university also plays a macroeconomic role through its contribution to the economic and social institutions in their activities and through f the search for a new development model in an internationalized context. Considering the globalized dimension of the contemporary economy and its ambivalent impact on societies, the opening and the intervention of the university must be under consideration on more or less wide territories by building multiple partnership cooperations.

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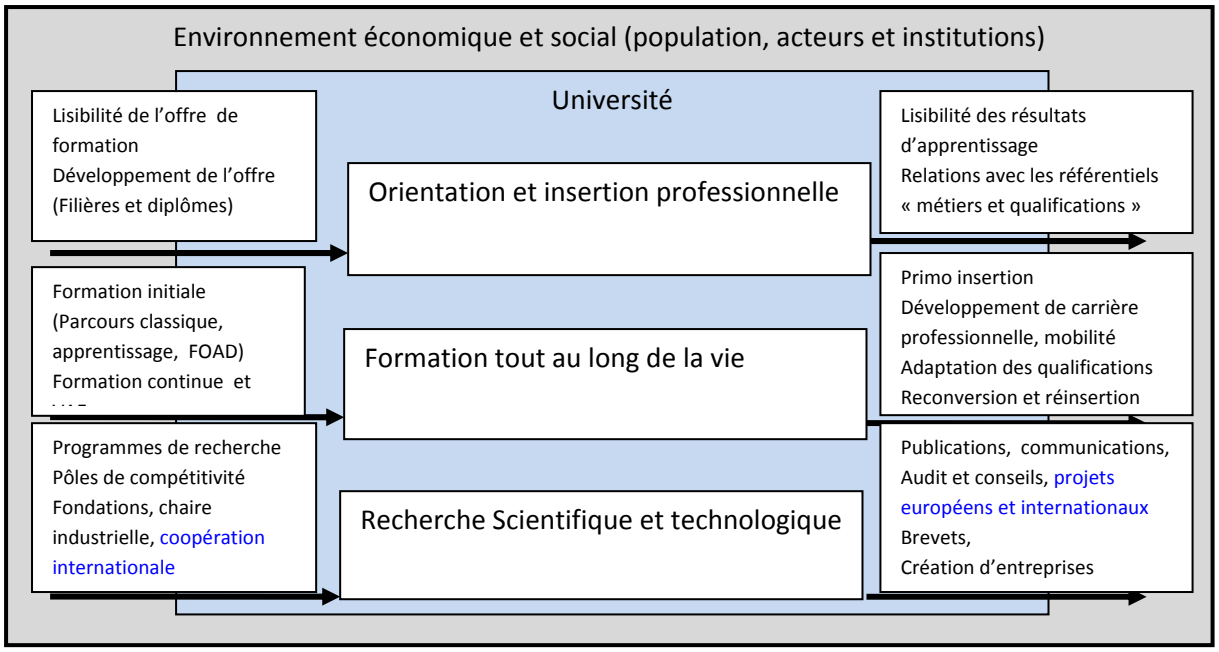
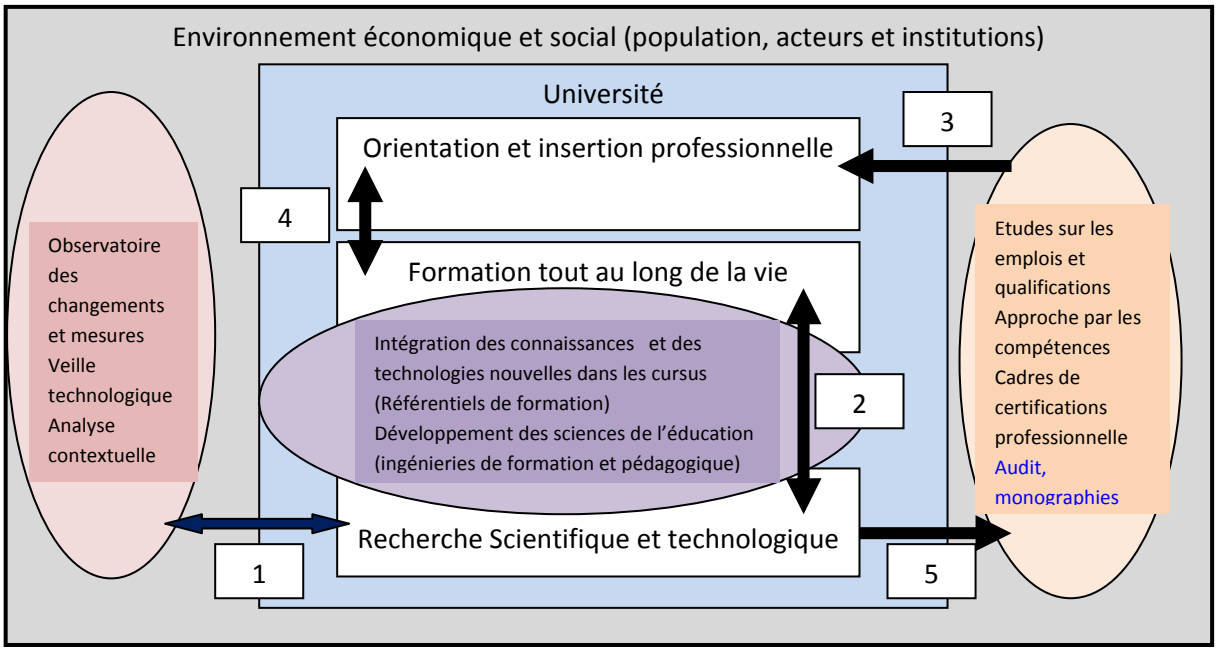
In the latter approach, the university is thus characterized by the emergence of new relational systems (networks) as well interns as external, making it possible to develop new logics of integration answering the contemporary societal complexity and to ensure a very great flexibility of the answers in adequacy with the singularity of the expressed needs.



In this context, the relations between research and the lifelong training (dimension "guidance and training") is at several levels and on various sets of themes.



The case study proposed constitutes an illustration of these new relations between research and the training throughout the life in France. The case study is associated with the field of the sustainable development. Initially, we will show that the research tasks developed on the sustainable development as well as the observation of the evolution of the activities in relation with the

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environmental problems (1) in France lead to integrate this approach in the university vocational training (2) by developing new sectors of formation with various diplomas at exit. In the second time, we will show how these formations can be presented in terms of outcomes of training formulated in competences – skills. This conception is based on the research tasks developed on the competences approach and on the construction of certification frameworks (3). Then, we will see how the evolution of the activities and employment on which fit the graduates (student and trainees of continuing education) of this sector leads to the emergence of the research issues related to the green growth, the green transition associated with employment and qualifications in some differentiated social contexts (4). Lastly, this approach of research can fit in various European and international programs (UNESCO, the World Bank, AUPELF…) leading to some field analyses and social dynamics in progress in different contexts. This body of research programs aims to enlighten and model the universal aspects of the sustainable development and the specificities associated with the observed social configurations (5).

II – Case study

1 – Research on sustainable development and building professionalizing education programmes in environmental management

1.1. Research on sustainable development: questioning sustainable development

One of the problems noted is the proliferation of definitions of the concept of sustainable development. Although diverse and wide-ranging interpretations of the concept of sustainability are inevitable given the broad nature of the term, this proliferation is unhelpful when it comes to building education programmes specialized in sustainable development. Many of the conceptual and methodological issues concerning the analysis and measurement of sustainable development are based upon the separability of the objects of sustainability and have an important influence on the academic and policy debates by incorporating sustainability as a goal. Even though *multidimensionality* is recognised *per se* amongst discourses and practises, the ecological, social and economic dimensions are treated as isolated objects of analysis, leading to diverse forms of reductionism. Sustainable development is commonly assimilated to a green development which prioritizes environmental sustainability over economic and social considerations. What is needed to make genuine progress is an analytical framework. In this respect, the economics of sustainable development has evolved rapidly in recent years, and the basic theory underlying conceptual thinking on sustainability has been greatly extended. In addition, new ways of enquiry such as complex systems theory have something to contribute to our understanding of sustainable development. We observe that there is a growing body of literature that consists of inter-disciplinary collaboration in the fields of economics, ecology and other social and natural sciences in order to analyse *complex* problems of ecological degradation. Possibly the most important contribution of the inter-disciplinary literature has been to draw on the work about the important implications of the ways in which the different dimensions of sustainability are connected. We do share this view and point out that sustainable development represents a "*method*", rather than a mere *object* of analysis. By "*method*", we mean here that sustainable development goes far beyond the standard conceptions

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of sustainability, mainly based on the environmental dimension and other sector-based issues, and tries to conceptualise the proper *articulation* between the different dimensions.

This "*method*" addresses the relationships between ecosystems and socio-economic systems in the broadest sense. We do consider that the "method" of sustainable development refers, in certain sense, to *systems thinking* – the ability to see the world as a complex system, in which we understand that "we cannot just do one thing" and that "everything is connected to everything else". Sustainable development, as a method for comprehending problems, requires more than technical tools. Sustainable development implies progress on solving complex problems through *collaboration* between disciplines. A single-discipline approach may not be sufficient for tackling some of the issues we face, but the specialised skills of each discipline are necessary for progress to be made through inter-disciplinary collaboration.

By applying this approach of sustainability to the field of environmental management, it contributes to underline the social and economic impacts of an environmental management. These impacts can be positive or negative depending on the content of the management strategy. Achieving sustainability is therefore different from other criteria, such as efficiency, and requires its own set of rules for management. Although it is possible for development to be both technically efficient and sustainable, efficiency does not automatically guarantee sustainability. This critical aspect of sustainable development is still often misunderstood.

1.2. Building professionalizing education programmes in environmental management

Nowadays, environmental preservation, risks, water and waste management constitute some preoccupations for both firms and lifestyles. Under the pressure of regulation and in a sustainable development perspective, firms and local communities have to integrate environmental considerations in their strategies (energy efficiency, waste management, transportation to reduce toxic emissions and nuisances, sanitation and drinking water processing).

In France, sustainable development represents a genuine political stake with the recent creation in 2007 of a "Super-Ministry" of Sustainable Development. In this economic sector, we identify three types of actors producing environmental goods and services:

- Eco-industries specialized in the production of services (waste management, industrial cleaning, etc.) and in equipment management (incineration mills, drinking water processing mills, etc.).
- Engineering consulting companies whose aim is to advise firms.
- Local authorities, territorial communities and associations specialized in the regulation domain.

The environment sector includes also the main actors of the demand for these services (private and public firms, local communities, etc.). With reference to the labour market, this body of activities refers to occupations that are in mutation due to the professionalization needs according to a transversal approach including social, economical and environmental consideration. These jobs deal with a variety of occupations as: responsible for eco-industrial services, person in charge of technical services in a local community, etc. These occupations can be considered as local services in the sectors of water, energy, cleaning and transportation of persons. They are characterized by an

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organization very decentralized, based on profit centres distributed across the national territory nearest the customers and users of these services.

In order to produce in the long run, this industry providing services and improving the quality of life have to endow their customers with collaborators seen as interface actors well-skilled in the long term. That raises the issue of building and enhancing skills embedded in a socio-economic context recording a notable transformation and facing the demographic shock which is affecting society and industry. Nowadays such skills are scarce and remain inadequate regarding the complexity and the instability of the context. it is then crucial to emphasize on the professionalization of their collaborators by endow them with new approaches and skills in a sustainable development way in order to:

- Perceive and think substantially on issues combining economic efficiency and technical skills within a united framework by taking account social, environmental and economic considerations.
- Consider, understand, value and manage firms' stakes and challenges.
- Organise at best the production firm (human management, production method systems, environmental management system)
- Conceive, advice and improve ways and means for implementing and providing services in terms of quality, security and environment concerns.

In terms of university qualifications, for a long time there were no adequate programs satisfying specific needs emerging from industry and local services. In the market of diploma, there were two types of educational programs unsatisfactory regarding the criteria of sustainable development. On the one hand, university qualifications linked to the sector of environment (management of water, energy, management of waste, transportation) was only associated with technical and productive aspects of the firm's activity. Thus it was not adequate with our conception of sustainable development. On the other hand, university qualifications in management were essentially oriented towards the tertiary sector.

Elaborating a new diploma or adapting an existing diploma stems from the identification of different categories of occupations associated with the considered sector. Skills issued from the identified occupation are then specified in accordance with needs emerging from firms and depend also on the technological and organisational changes affecting the firms' activities. The employability refers to several aspects. On the one hand, it is necessary to train apprentices in terms of knowledge, know-how and behavioural aptitudes required for current occupations. It results in the immediate employability of the apprentices. From the one hand, it is important to pass on learning and fundamental knowledge by reinforcing the capacity of adaptation in accordance with the future evolution of professional qualifications. This refers to a long-term approach aiming at a more secured and viable professional course by providing the conditions for an employability on a long-term basis.

Regarding these objectives, the University has a specific asset. The acquisition of fundamental knowledge remains a specific trait of the academic diploma in contrast with certifications strictly professional. By definition, the University is the locus of knowledge production.

The academic diploma has a real added value permitting individuals to use later some validation plans in order to pass required training for achieving a personal professional course. A

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professional diploma issued by the University is the result of an intersection between the knowledge sphere and the social activities sphere specified in terms of skills.

The University of Versailles (UVSQ) have largely promoted and valued sustainable development in terms of research (academic and applied research) and education programmes based on a substantial pluridisciplinary potential (economics, geography, physics, astrophysics, climatology medicine) in the domain of sustainable development. In terms of education programmes, it came to conceive alternative academic and professionalizing programmes in order to enhance skills required for management occupations in the sector of the environmental management by stressing on the analytical framework of sustainable development. For building and implementing these programmes, the combination between research and industry and the territorial approach (territory, local actors) are crucial.

Here is an example of synergy between research (represented by the Center of Research REEDS – Research on Ecological Economics, Eco-innovation and Engineering of Sustainable Development) and higher education programmes (from bachelor level to PhD levels).

Thématiques de recherche dans les laboratoires REEDS

Le domaine scientifique principal du laboratoire REEDS est la création et l'application de connaissances en économie écologique. Il s'agit d'analyser et de contribuer au devenir des systèmes socio-économiques et écologiques, c'est-à-dire, leurs dynamismes, leurs changements, et leurs interactions par rapport aux processus sociétaux de décision et de choix.

De manière générale, les recherches menées par les membres de REEDS et leurs partenaires s'orientent autour des éléments suivants :

- Dynamiques de systèmes socio-économiques et environnementaux
- Stratégie d'éco-innovation et de responsabilité sociétale des entreprises
- Aide à la décision privée, publique, et collective
- Evaluation économique et environnementale & indicateurs du développement durable
- Observation socio-économique et de valeurs environnementales<

Fondation FONDATERRA

Fondaterra (Fondation Européenne pour des Territoires Durables) créée en septembre 2004 et maintenant fondation partenariale de l'université de Versailles Saint-Quentin-en-Yvelines, constitue un réseau unique d'institutions multidisciplinaires publiques et privées. Fondaterra fédère des compétences de recherche, de formation, de médiation des connaissances et d'expertise autour de la thématique du développement durable des territoires. Ce regroupement vise à structurer, dynamiser et à rendre visible un véritable pôle d'excellence et de compétitivité européen.

Fondaterra se positionne comme un véritable réservoir d'innovations sur le développement durable irriguant l'économie territoriale. Elle a une dynamique d'entraînement passant par une dynamique d'expérimentation et elle fédère acteurs publics et privés autour de programmes plus ambitieux et complets : de l'action à la médiation des connaissances en passant par la formation.

Chaire industrielle

Cinq établissements d'enseignement supérieur et de recherche (Université Paris-Sud 11, Université de Versailles-Saint-Quentin-en-Yvelines, Ecole Normale Supérieure de Cachan, Ecole Centrale de Paris et Ecole Supérieure d'Electricité - Supélec) se sont associés, au sein du Pôle de Recherche et d'Enseignement Supérieur UniverSud Paris, pour créer avec cinq entreprises partenaires (Alstom, GDF SUEZ, Italcementi, Saur, SNCF) et l'Ademe (Agence de l'Environnement et de la Maîtrise de l'Energie) une chaire internationale sur les éco-innovations.

Masters Professionnels en Sciences de l'Environnement, du Territoire et de l'Économie

- Economie et gouvernance de l'environnement et du territoire
- Master 2 professionnel Sécurité des transports
- Master 2 professionnel Tourisme et environnement
- Aménagement, énergie et écologie territoriale (AMENET)
- Master 2 professionnel Analyse économique et gouvernance des risques (AEGR)
- Master 2 professionnel Construction Durable et Eco-Quartiers (CDEQ)
- Master 2 professionnel Sciences et techniques du génie logistique, e-logistique et supply chain durable
- Master 2 professionnel Stratégies de Développement Durable et Responsabilité Sociétale des Entreprises (STRAT-RSE)
- Ingénierie du développement durable (IDD)
- Master 2 professionnel Droit de l'environnement, de la sécurité et de la qualité dans les entreprises (ESQ)
- Master 2 professionnel en management de l'éco-innovation (ECO-INNOV)
- Master 2 professionnel Etudes arctiques (ARCTS)
- Master 2 professionnel Intelligence Economique et développement durable (IEDD)
- Master 2 professionnel Sciences de la Santé, de l'Environnement, du Territoire et de la Société (SSENTS)
- Master 2 professionnel Télédétection et Géomatique Appliquées à l'Environnement (TGAE) - Ouverture en septembre 2012 sous réserve

Licences professionnelles

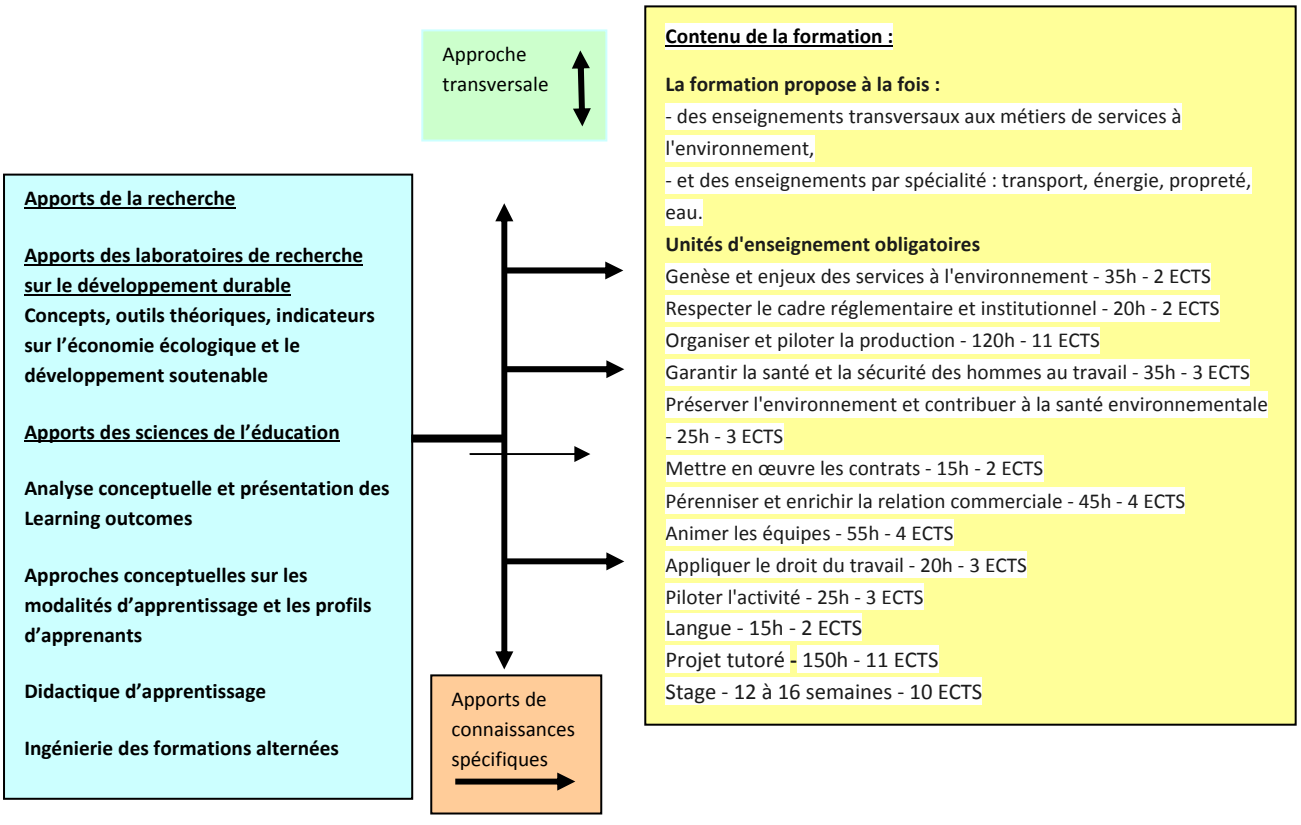
- Licence professionnelle Aménagement du paysage, spécialité gestion et management de chantiers d'aménagement de l'espace
- Licence professionnelle Commerce, spécialité Chargé d'Affaires en Vente de Solutions Durables (VSD)
- Licence professionnelle Protection de l'environnement, spécialité Gestion des services à l'environnement (GSE)
- Licence professionnelle Génie Civil et construction, Spécialité Ingénierie de l'Efficacité Energétique des Bâtiments (IEEB)
- Licence professionnelle Production Industrielle, spécialité Ingénierie Intégrée, mention qualité & environnement

Diplômes universitaires de technologie (DUT)

- DUT Hygiène, Sécurité et Environnement (HSE)
- DUT Génie Civil

In this perspective, the vocational licence diploma “management of environmental services” is an example. This vocational diploma emerged from the demand by firms in terms of qualifications and occupations in the sector of sustainable development. The identified occupations are classified into four specialities: energy, cleaning, transportation, water. For each of these occupations, three levels of management have been identified in the context of an industrial concern: executive, chief executive, general manager. The professional licence deals with the level of executive in an industrial concern. Both technical and managerial skills are required not only for current activity but also for achieving a career in the long run. This diploma aims at endowing students with teaching, conceptualizing a problem and defining long-term solutions in adequation with scientific, technical, economical, juridical, social and environmental requirements. This diploma was built trough a reflection based on the skills engineering.

So, if we take for example the professional license(Bachelor's degree) " Environmental protection, speciality Management of the services to the environment ", the contributions of the search(research) meet in many respects in the aimed objectives of apprenticeship and the contents of the training, but also in the educational strategy of implemented professionalization in this program. Concerning the aimed objectives of apprenticeship, it is a question of acquiring the skills on each of the fields of activity of a person in charge of a center of exploitation (whatever is the speciality), and in the conduct of their project while integrating a transverse approach printed by the problems of the sustainable development. In terms of behavioural skills, the training aims at developing a capacity of global analysis with taking of drop to integrate the various dimensions and aspect of a problem or a project into the search for a solution.



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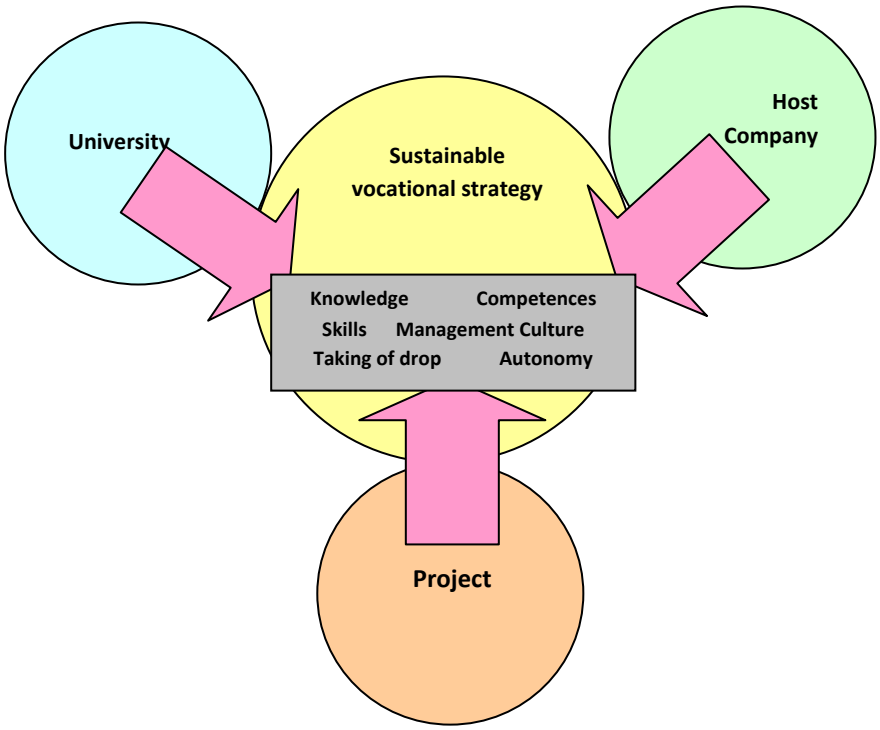
Concerning the educational methods of the training, the Bachelor's degree is proposed under the modalities of the training by alternation. That is the learners are for a part of time in training at the university and for another part in training in the company. The educational strategy of professionalization bases on the theoretical and abstract contributions delivered by the university, the professional skills and the corporate culture stemming from activities led within the framework of the host company, and finally the autonomous experiment of the conduct of a project.



This approach of the training allows to build an index form of presentation of the diploma, formulated at first in general and transverse skills so by reflecting the level of Bachelor's degree, then secondly, declined in professional skills to strengthen the reading in terms of immediate operational effectiveness in exit of the program (annexe 1). This legibility increased in for purpose to facilitate the occupational integration but also the resumption of studies by allowing a positioning and as the case may be an accreditation of prior learning either to reach the program (VAP), or to validate its experiences by obtaining all or any of the diploma (VAE).

The case study of the vocational licence “management of environmental services” is an example of the building of a professional diploma reflecting the synergy between research, industry based on the analysis of skills engineering. This approach aims at building professional educational programs satisfying the vocation of the University trough its social function regarding the knowledge acquisition and its capitalization and lifelong education.

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3 – Evolution of activities, and jobs: some research issues

The issue of the relationship between skills, activities and education programs in a sustainable development perspective leads to some research issues dealing with societal preoccupations. First, the diploma like the vocational licence in "management of environmental services" has contributed to the implementation of a societal project "The Val-Fourré Project" in relation with the issue of developing a vulnerable city (an area called Val Fourré in the city of Mantes). It consists of identifying some solutions combining environmental services provision (transportation, water, waste management, energy), urbanization, territorial and population livelihood dimensions. The idea sustained in this project consists of providing some reflections and identifying some solutions in terms of sustainable development (sustainable mobility, resources valuation, renewable energies, sustainable waste management).

Secondly, the development of reflections and tools for the building of professional trajectory and the associated schemes for lifelong education can be illustrated and analyzed within the development and growth issues. The crises as a worsening factor of vulnerability constitute a challenge in the developing countries, emergent and in the industrialized countries. Thus the issue of adaptation and transition is crucial when it comes to consider some alternative models of growth based on the qualitative dimension. The aim of the research is to analyze the impacts of the multidimensional crises on employment and the qualifications by exploring f the conditions according to which the lifelong education could follow a controlled process dealing with a sustainable developmental perspective.

In particular our research program stresses on the green transition issue combined with the notion of mutation, which refers to an approach more including and multidimensional of deep transformations affecting the systems. This vision of the change makes it possible to better emphasize the complexing character of the sustainable development as a grid of reading of the world, necessary to a better comprehension of the societies in evolution in a context of globalization. The change as a process implies two visions. The first one is associated with the endogenous character of the process; it refers in particular to the capacity of transformation for an organization due to the behavior of the actors evolving in the organization. The second one is related to the role of the politics as a legitimate authority having for function to impel at a given time (at various moments) a particular change (specific changes). The articulation of the two dimensions constitutes a double requirement for the development of resilience.

In a context marked by public environmental policies for protection and fighting against climate warming at the international level (agreements, negotiations, commitments) and national level (*Les Grenelles de l'Environnement* in France), the green activities draw attention. In 2008, a report called "Towards Decent Work in a Sustainable Low- Carbon World", published by the International Labour Organization was specifically dedicated to green employment. In this report, green employment is concerned with "a more sustainable economy and society to preserve environment for the present and future generations and to guarantee all to the individuals (…) the conditions of greater equity and integration". Many studies confirm the potential employment implied by green activities. The

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green growth is seen as a destruction-creative process contributing to the potential impacts in terms of development, capacity building, and education in both emerging countries and developing countries. However, some conditions must be attained together within the green transition so that this potential can be concretized: needs of implementing some public policies for preserving environment orienting the economy towards the green growth model (for instance, the Law "Grenelle 2" in France); requirement of men and women educated and trained in sufficient number for the potential sectors (sector level, regional plans); lower the inadequacy between supply and the job demand, which is tangible and slows down the overall movement with some adjustment cost in the labor market.

The green transition could be characterized by the shortage of skills and qualifications. In particular, green jobs require not only new qualifications, competences but also some enriched competences which were not initially green. From the perspective of sustainable development, the transition to a green economy (by the use and investment in technologies and resources) requires some training and education courses for both higher levels of qualification and manual workers and a formalization for identifying the skills (transversal, specific) to be enhanced. In order to the anticipation of the future needs, taking into account the challenges of the green growth in terms of technology innovations and human resources and vocational training constitutes one of the major axes to develop due to the emergence of new activities (marked by technical and professional requirements) and reconversion process.

More precisely, this green transition as a mutation process could affect many sectors (about 50 fields), the whole of the activities (more than 100), several functions (technician, operators, foremen, supervisors, and proximity managers) and department (R&D, design, innovation, and management). For instance, the thermal isolation, recycling are the activities characterized by a recasting or a repositioning of their core activity (renewable energies, maintenance and automobile repair). The green transition from a sustainable developmental perspective will be able to be achieved only if it guarantees, for the individuals, a security and a "power of resilience" throughout their professional trajectory thanks to a lifelong education gathering at the same time transversal and specific competences. The common reference which is essential concerning these activities (formation, professional activities and experience) refers to the concept of "competence". The competences are defined like some combinations of knowledge, know-how and behavioral aptitudes, which make it possible to a person to achieve a pursued goal, in a given context, with a certain level of success. This approach by integrating the informal and non formal assets stresses on a criterion of universalism.

The evolution and the repositioning of the activities implies to accompany the mutations affecting the competences within the framework of individual strategies of insertion or construction of the professional trajectory. It requires the implementation of the recognition of the assets and the adapted responses in terms of formations. The competences approach and modeling aim to decipher analytically a professional trajectory as well as to define the components of the lifelong education project.

Thus, this research linked with the green transition issue makes it possible to emphasize some key elements for the implementation of a lifelong education project in a sustainable development perspective:

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- The determining role of the phase of definition of the project and the expression of personal or collective choices in order to generate some dynamics of training « controlled »
- The importance of the personal valuation to build an SWOT analysis in order to « optimize » the trajectory
- The taking into account of macro economic and social dynamics (creative destruction process) to detect the opportunities and the processes of adjustment to be implemented
- The fundamental role of the Right and in particular of the rights to the lifelong education whatever one's status
- The importance of the institutional partnerships to identify the vulnerabilities and to support the implementation of effective solutions
- The main function of the lifelong education engineering and modeling in terms of competences to allow the validation of the assets of the professional experience as well as to suggest adapted personalized solutions of formation.

Making economic growth and development compatible with a sustainable environmental footprint will require a drastic shift towards clean development and green, low-carbon economies. This will require a great transformation of the activities. A lack of environmental sustainability may involve the deterioration of the environment which directly impacts the human well-being. The literature shows high and persistent rates of return over time for investment in education, R&D, and other forms of human capital and knowledge-enhancing investments. The underinvestment in human capital may significantly affect the potential for environmental sustainability. Our actions aim at exploring the possibilities for an economically, socially and ecologically sustainable society. In particular, it deals with the interactions between employment, ecological sustainability and growth through the issue of green transition along a sustainable development path. It stresses on the issues of jobs, human resources and the changing skills formation of the workforce induced by the green growth and particularly by the green transition. The transition to a green economy (by the use and investment in technologies and resources) politically encouraged in France (*Grenelles de l'environnement)* implies both technological and social innovations. It requires a strong investment on human resources by enlarging the opportunities for skills formation and training for both higher levels of qualification and low skilled workers.

Our implication through the case -study of Val-Fourré consists in favoring synergies between different actors: local municipalities, university and firms located in the region. The objective for the local authorities is to develop in a sustainable way the Val-Fourré zone characterized by a high rate of unemployment and isolation. In particular, many activities programs and environmental services have been designed according to social, economic and environmental criteria (eco-construction, renewable energies, sustainable mobility, industrial ecology, waste recycling and valorization). These activities use fewer natural resources that pollute less and aims at stimulating to employment and improving quality of life. In order to design and perform these programs in an integrative way,

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discussions and contributions have been made include industrial (Veolia Group), community-based and university (for research support, new education programs design, competences engineering). From the research point of view, the case of Val Fourré requires the application and the development of methodologies and tools (urbanism, urban planning, territorial diagnosis, socioeconomic valorization of environmental services, deliberation approach, competences and skills analysis based on activities and jobs dynamics). This set of methods and reflections yields to bring some innovations with partners (firms, local collectivities, lifelong department of the University) for analyzing green jobs to supply relative to the local demand, building and improving the contents of diplomas (delivered par the University of Versailles) specialized in the sustainable development: Safety area, real state economics and management, management in environmental services, environmental services marketing).

Beyond the issues of green transition, the research based on reflections, modeling and on the engineering of lifelong education constitutes a structuring method and process in a perspective of sustainable development because it deals with the need for the control by the people concerned by intregrating a controlled systemic adaptation, factor of a reinforced social cohesion in societies.

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Annexe 1 : Fiche de présentation de la Licence Professionnelle " GESTION DES SERVICES A L'ENVIRONNEMENT "

Diplôme et Intitulé			
Diplôme :	Licence Professionnelle		
Intitulé : (mention,...)	Protection de l'environnement)		
Suite intitulé : (spécialité, option)	spécialité Gestion des services à l'environnement (GSE)		
Autorité responsable de la certification			
Nom Université :	VERSAILLES SAINT QUENTIN en YVELINES	Sigle Université.	UVSQ
Lieu service VAE (ville) :	VERSAILLES	Lieu service VAE (Département) :	78

Spécialités de formation (NSF)		
Spécialités de formation (NSF) (3 au maximum)		
Codes NSF :	lettre	Libellés NSF :

Métiers accessibles par le détenteur de ce diplôme	
Fiches ROME les plus proches (3 au maximum)	
Codes :	Libellés :

Mots-clés

Niveaux de certification			
Niveau **CNC** :	II	Niveau CEC :	6

Compétences transversales

	Activités contextualisées	**Niveaux** [(a)]				
		N	**A**	**M**	**E**	**0**
Communes aux diplômes	Organiser et planifier son travail personnel			x		
	Effectuer une recherche d'information (sur internet, dans des bases de données, ou toute autre documentation)			x		
	Traiter l'information			x		
	Exploiter l'information			x		
	Réaliser une étude			x		
	Conduire un projet (avec une équipe)			x		
	Produire des idées nouvelles pour répondre à des besoins ou des problèmes (créativité)			x		
	Résoudre un problème			x		
	Utiliser les TIC ou Utiliser les TIC dans le cadre d'un domaine spécialisé			x		
	Communiquer par oral en français			x		
	Communiquer par écrit en français			x		
	Communiquer par oral en anglais		x			
	Communiquer par écrit en anglais		x			

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	Communiquer oralement et/ou par écrit dans une langue étrangère autre que l'anglais					o
	Respecter les principes déontologiques et éthiques du domaine professionnel et/ou sociétal			x		
Propres au diplôme 2 au maximum non prévues dans les compétences communes	Activités contextualisées associées aux compétences transversales propres au diplôme, non prévues dans les compétences communes	**N**	**A**	**M**	**E**	**O**

Compétences professionnelles et/ou disciplinaires					
	Activités professionnelles et/ou disciplinaires contextualisées	**Niveau** [b]			
		N	**A**	**M**	**E**
Compétences professionnelles et/ou disciplinaires	Connaître la Genèse et les enjeux des services à l'environnement		x		
	Respecter le cadre réglementaire et institutionnel			x	
	Organiser la production			x	
	Piloter la production			x	
	Garantir la santé et la sécurité des hommes au travail			x	
	Préserver l'environnement et contribuer à la santé environnementale		x		
	Mettre en œuvre les contrats			x	
	Construire et enrichir la relation commerciale			x	
	Pérenniser la relation commerciale			x	
	Animer les équipes			x	
	Appliquer le droit du travail		x		
	Piloter l'activité à l'aide des procédures budgétaires et des tableaux de bord			x	
	Calculer les coûts		x		

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