3 partners, 3 frameworks, 3 goals: the WIL to achieve the success of all

Anne CREQUIS (FORMASUP), Nathalie LEROY (ESC Lille),
Walter NUNINGER (Polytech'Lille/IESP), Arnauld BERTHOUX (ULCO/Polytech'Lille/IESP),
Jean-Pierre PAUWELS (ICAM)

FORMASUP, 7 bis Avenue de la Créativité, Parc des Moulins,
F59650 Villeneuve d'Ascq, France.
Tel : +33(0) 328.337.520 - Fax: +33(0)328.337.521
Anne.crequis@formasup-npc.org, n.leroy@esc-lille.fr, walter.nuninger@polytech-lille.fr,
arnauld.berthoux@polytech-lille.fr, jean-pierre.pauwels@icam.fr

Abstract

FORMASUP (Training centre for apprenticeship of higher education) acts for the improvement of collaboration and exchange process between the main actors of the training process: apprentice, company mentor and school tutor whose aspirations, goals, constraints and framework seem to differ. Indeed, the partnership between universities and companies contributes to the success of educational curriculum for apprenticeship; a training process based on work experience that improves employability of the graduates (degrees are from under graduate to master degree). Despite the legal framework in France that favours apprenticeship (Crequis et al. 2009), sandwich courses with academic learning at school that alternates with work experience in the company is not so easy! This paper reviews the goals of actors (apprentice, his mentor in the company, his tutor from the training centre) and presents the tools and methods used to improve exchanges between them. Indeed, the school tutor and the mentor should collaborate in order to lead the apprentice to the success thanks to a convenient curriculum and right tools of assessment. FORMASUP and its associated training centres developed tools and methods further presented such as: procedure for feedback in the apprentice group, identification of the tutor role, joint evaluation tools. Good results were achieved. Indeed WIL:

- allows the apprentice to develop his competences and improve his employability
- gives the company the opportunity to recruit a young who already knows the industrial field
- improves the ability of the training centre to form on a quality basis

Keywords: work based learning, professional skills, tutorial, inductive pedagogy, apprenticeship, sandwich course, training process.

1. Introduction

FORMASUP is a training centre in Nord Pas de Calais region (north of France, near the Belgium border) dedicated to apprenticeship of higher education. It offers 65 academic degrees with 3000 apprentices enrolled in partnership with 2 000 companies. The purpose of this structure is to improve the collaboration between the academic training centres (universities, schools), the firms and the French authorities (regional administrations and organisations). We stress on the fact that FORMASUP covers all the training levels and provides a professional qualification that confers further education degree. With implied educational professionals and motivated firms it makes it possible for young adults to acquire a diploma, with qualification as well as professional experience. To achieve this goal, FORMASUP promotes the development of pedagogical tools adapted to this public of learners in order to improve this acquisition of abilities through work experience. Such tools connect the 3 actors of the training: apprentice, company mentor and school tutor whose aspirations, goals, constraints and framework differ at first view.- With respect to this framework, the apprentice is both a student and an employee with a work contract. Such a system is a plus for learners to get acknowledged degree which is the same as the one by the conventional education system but based on another learning process: conventional system offers academic program with only short training period in the industry whereas apprenticeship gives a higher professional experience and the knowledge of everyday life in a company. It's important to point out that throughout the training the apprentice gets a salary as any employee of his skill. The advantages for the company are obvious: they take part in the learning process to get a more convenient curriculum from the training centre: with a quicker and more adapted reply to their demands. But schedule can be difficult to design with respect to industrial constraints, financing is not only the clue but also motivation, easy contacts between actors whatever the location is and convenient pedagogical methods and tutoring. Thus, it is necessary to implement tools which make easier the relationships between the apprentice, the company and the training centre. This observation leads to the necessity of promoting work-based learning system, allowing each actor to take benefit of the process and obtain the right return on investment. This paper first reviews the actors, goals and presents the tools. A second part will present the methods used to improve exchanges.

2. The actors of the apprenticeship system

The apprentice, first actor of the process, decided to follow such kind of training in order to get a diploma: therefore he takes benefit of work experience as well as financing through a salary. In addition, already employed, he expects recruitment when graduate. **The company** considers apprenticeship as an alternative recruitment process which is part of the labour force strategy: a way to enforce and keep the internal abilities. The progressive integration of the youngest in the firm within mentoring allows the skills and knowledge transmission between generations. Anyway during such tense economic period the first priority remains turn over, productivity and benefits, hence training might be viewed as a real drawback. **The training centre** develops apprenticeship as another way to get diploma developing an offer of trainings adapted to the public and to the industrial demands. Such a policy both relies on economic needs and financing diversification. The first aim of the school is the transmission of knowledge, know how and soft skills. Training centres and companies are two environments with their own logic that will be for the apprentice the framework and mainstays of his work based learning:

- on the first hand, the company is the place of self achievement, of interaction and development of competences due to the strong company productive logic
- on the second hand, the training institution is the place that favours formalization, reflection, structuring and expression due to its logic of knowledge transmission

But the apprentice too has his personal logic with respect to training processes and employability: the way he considers the institution and the firm, the way he wants to learn, the way how he works.

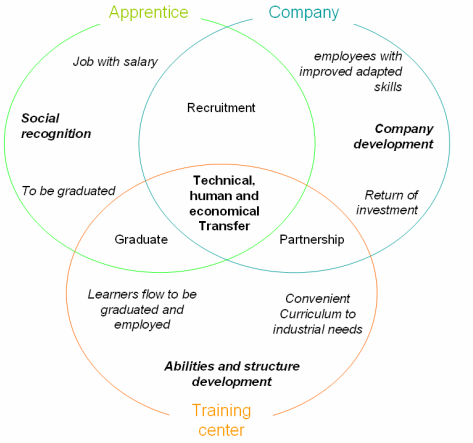

Figure 1: circles of the actors interests

So, work based learning is part of an integrative process that allows a better reply to the needs with respect to the three following targets: knowledge establishment, acquisition of abilities, labour identity. Our process of training can be seen as similar to the virtuous circle of sustainable development shown on figure 1: a rule to develop our training tools. Indeed success relies on the fact that our tools are ways to reconcile the three interests of each actor: graduate, recruitment and partnership. It respects each other interests and framework to achieve the mutual efficient enrichment based on transfer of skills, expertise, technical knowledge, economical development. That is why our tools and methods rely on a strong interaction between actors with proofreading experience and transfer of abilities through what we call the winning-trio. This trio is composed by the apprentice (main actor of his training), the company mentor and the school tutor. To ensure the efficiency of this training, it is necessary to build the Work based Learning process and curriculum in such a way that the three goals are complementary achieved.-The three actors of this process, apprentice, company mentor and school tutor will thus have to:

- define the industrial mission of the apprentice with both industrial results and pedagogical ones. It has to be adapted to build a progressive process with respect to the level of capacity of the apprentice all along the training (formative work experience)
- give the knowledge, know-how and soft skills necessary to the realization of the industrial missions (professional profile)
- develop inductive pedagogy to help a better understanding of problems upon which example, the theory is conceptualized. (Problem Based Learning)
- develop a positive critical thinking by the apprentices in order to capitalize the acquired skills on the company field (proofreading experience).

3. The approaches, methods and tools of the work-based learning process

It would be rather difficult to make an exhaustive list of the different tools and methods used in the associated training centres of FORMASUP, so we will only point out our reflection on some innovative and common applied solutions that take into account the three targets of the actors. These approaches are based on

professional requirements and position of the apprentice in the company that put him in a worthwhile framework allowing dual coaching (school and company) (Denoyel N., 2002)(Eilks et al., 2009): academic curriculum based on a professional profile, winning trio, inductive pedagogy and problem based learning, proofreading experience, e-porfolio, cooperative assessments.

3.1 Curriculum and professional profile

Academic curriculum is based on a professional profile that describes the expected capacities. It includes sandwich courses: academic period at school that alternate with a formative situation in the company. Such professional profile should be defined in cooperation with the companies. The apprentice mission will be designed to cover all the application fields of the professional profile.

3.2 The double tutoring

The meetings and interviews between the apprentice and his mentor and tutor are a support to develop self analysis and help the apprentice personal evolution: know-how, behaviours, skills and capacities. The apprentice is coached by identified persons recognized for their competency. Tutors work in a cooperative manner guiding the apprentice so that he achieves his goals (Houssaye, 2000). This relation allows transfer of their skills on scientific, technological, economic, social and human fields. The tutors will listen, encourage, give advices but will not give solutions. Aim is to help the learner to discover his new identity as an engineer (Paul, 2004)(Nuninger et al., 2009).

3.3 Inductive pedagogy and Problem based learning

Apprentices are facing the company reality and constraints, so deductive pedagogy (first learning the theory and then applying it) is not convenient for a quick and effective acquisition of knowledge and skill (Michel, 2005). Problem based pedagogy and inductive pedagogy are more complex methods for the training centre to perform but, much more convenient for this public: apprentices can easily check their experience (the example) and try to build the theory and solutions in order to improve their actions. The learning process relies on the Kolb learning cycle (Kolb, 1984)(Nuninger et al., 2009)

3.4 Proofreading experience

The practical work experience analysis is a collective and individual exercise based on proofreading experience: the aim is to analyse and make links between the professional situation and the personal perception of situation experienced. As a consequence, the knowledge about the actual mission is improved and the apprentice adapts the way he manages his mission (Wittorski, 2005). The apprentice becomes more aware of his experience and new skills, making his own the industrial reality. The aim is not so much the professional experience but the understanding of the framework, the meaning of the action in order to set up new concepts and knowledge about the action and its complexity. Results are positive criticism and open mindedness (Richert, 1990)(De Villers, 1991)(Perrenoud quoted by Altet, 2005) and have a significant impact on the professionalization of the apprentice and his individual enrichment.

3.5 The Portfolio approach

E-portfolio (electronic formalisation of experience) is in fact a way to make apprentices reflect about their personal and professional experience through a three step process: proofreading, writing and valuation of experience leading to a Life-Wide curriculum (Jackson, 2009). This global reflexive vision is based on three purposes (Layec, 2006) dealing with four evidences (absolute, transitional, independent and contextual knowing, (Baxter, 2001)):

- economical: everyone has a skills capital to develop and make productive
- formative: the apprentice develops his self analysis and self assessment capacities from his work-based learning through an inter and transdisciplinary knowledge and by the link between knowledge and experience, writing and the peer group of apprentices (Bucheton, 2003). Learning, being trained, giving
- meaning to professional experienced situations through a process based on interactions between the know-how and the experiences. The writing allows integration of the time dimension and distance towards the work experience.
- existential: the apprentice makes his own his story thanks to the narration.

A better understanding of the professional experience is achieved during this progressive process that allows the elaboration of the individual concept references. Professional identity is constructed.

3.6 Cooperative assessment

With regard to the training, the professional activity proposed to the apprentice has to match the acknowledged degree requirements. Therefore a regular interaction between the school tutor and company mentor allows the correct definition of the mission that includes the company result and the pedagogical goals: the mission is a

formative situation. Assessment of ability in the company relies on indicators taking into account all the aspects of the activity: performances, action to achieve the goal, reaction with respect to stress situation and opportunities. Assessment of ability by the training centre also takes into account the way the mission was conducted in a peculiar environment (Clot, 1999)(Figari, 2006)(Alastair 2007). The competences assessment is realized jointly with the apprentice, the company mentor and the school tutor based on the existing requirements of the company and the school.

Tool	Aim	Plus	Difficulties	Remarks
Curriculum based on professional profile	The pillar of the training process leading to skill acquisition in addition of knowledge.	Lead to ability assessment	Pedagogy should be adapted: inductive. Assessments might not be reduced to knowledge evaluation which is not the purpose here.	Cooperative discussion and partnership with company and training centre help the definition of efficient professional profile and constant update.
Double tutoring (wining trio)	Expertise transfer Mentoring	Direct transfer of abilities. Online following of the apprentice evolution	Time consuming Finding the common period for meetings. Making the difference between coaching and expertise (which is not the aim).	Requires a real involvement of actors with specific training of tutors (active listening relationship, control of maintenance techniques: questioning, explanation ...). Tutors abilities should be relied to the mission of the apprentice.
Inductive pedagogy and PBL	Theory understanding facilitated through real examples from personal and professional experience. Learning autonomy.	Develop the ability to learn by oneself and to make proposals.	One risk is a lack in the theory due to a not convenient PBL process. Needs time for the reflection process.	Requires a change of mentality from the pedagogical team and a real knowledge of the entrepreneurship problems; hence the need to establish mechanisms of pre-formation
Proofreading experience through feedbacks	Learn from the other experiences. Urge the personal analysis and ability to present professional and personal experience.	To take distance with respect to experience and knowledge so that a better understanding of oneself is achieved	Difficulties in setting up such a process without the adhesion of the apprentices. Information confidentiality. The semantic of work : the language difficulties to relate work experience	Such process is only understood by apprentices afterwards: they hardly see the pertinence at the beginning of the process and therefore might not join the exercise positively.
E-portfolio	Urge the personal analysis of professional and personal experiences.	Develop employability within a better knowledge of their abilities: ability to sell who they are during a recruitment process	Apprentices might reduce the exercise just to the use of electronic tools. Confidentiality of the described work missions.	Security of electronic tools should be stressed on to alert the apprentice.
Double assessment	Cooperative assessment: both professional and pedagogical	Assessments not only rely and knowledge but focus on abilities: knowledge, soft skill and professional ability. The process allows identification of improvement axes.	Difficulty to make consultation be possible due to strong debates: argumentation might considerably differ	Better assessment if the apprentice gives his personal opinion with respect to his evolution.

Table 1: Identified plus and difficulties of developed tools during work based experience training process

4. Conclusion

The French educational system allows different ways of access to academic degrees. Conventional access represents the main number of students whatever the level is. Nevertheless, historically France also facilitates work based learning as another way to be graduated. Due to the increasing demands of industrial partners for quicker training and quickly adaptable employees, this way of access to diploma through work experience

developed: actually apprentices flow and training offers as well as the level of degrees increase. This system is part of long life learning process for social modernization and industry development as a clue to economic uncertainties and necessities. Indeed industry requires higher qualification and abilities. The strong partnership between all the actors makes apprenticeship a success thanks to suitable academic curriculum. This partnership is a success due to the tools developed that facilitate the relationships between actors, formalise the action of each one during coaching and describe the expectations based on professional profile. They promote the work-based learning system as a real added value for the company, the apprentice and the training centre. Thus, the success can be evaluated thanks to the rate of our graduates (more than 90%) upon which one 80% find a job within 6 month, We keep on developing the tools and improving it, basing our work on exchange between tutors, mentors, meeting dealing with practices, quality evaluation with feedback.

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