

Handwerkskammer für München und Oberbayern





































# **LEARNING ATELIER:**

## **DESIGN THINKING WORKSHOPS OF LEARNING PRACTICES AND PROCESSES IN DUAL TRAINING**

#### WORK PACKAGE

T2 - Innovation and Quality in Dual Education

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# SUMMARY

#### INTRODUCTION

This report describes the activities carried out by the Autonomous Province of Trento to develop a new training programme for company's tutors for the acquisition of skills on learning processes through a design thinking approach. The programme, named "Learning Atelier", sees the participation of representatives of SMEs as well as educational institutions and an expert facilitator that guides a heterogeneous group of actors to identify issues/challenges useful for their professional development, to describe and share their strategies and competences and finally integrate those strategies in order to produce a list of best practices to be suggested in the future. Furthermore, the programme considers the aspect of soft skills and ideally retraces the four main phases of educational activity: readiness to learn, learning design, motivation to learn and learning assessment.

### **ACRONYMS**

PAT: Autonomous Province of Trento; DIC: Department of Instruction and Culture; SMEs: Small Medium Enterprises; CTS: Central Training School; DT: Design Thinking; Design Thinking Workshop: DTW; STs: School Tutors; CTs: Company Tutors.

#### **EXPERTS INVOLVED**

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The Learning Atelier was organized by the Vocational Education, Higher Education and IT Support Division and the Education Service (Office for the Evaluation of School Policies) of the Department of Instruction and Culture (PAT) and thanks to the support of the Didactic Pedagogical Office.

The initiative was divulged with the precious support of local Associations of category and Educational Institutions.

A special thank is due to Prof. Maurizio Gentile, Associate Professor of Didactics and Special Pedagogy at the LUMSA University of Rome, for the effective and engaging facilitation of the programme.

Finally, a sincere thanks to Dr. Rita Festi and Dr. Annalisa Scarlino of the Central Training School (CTS) who participated in the initiative in the role of observers. During the months of May and June 2020, several remote meetings were held between CTS and PAT in view of the realization of the Learning Atelier, an initiative that CTS deems of its own interest in relation to its mission of promoting the quality and innovation of training systems.



# 2 BACKGROUND

# 2.1 DUAL EDUCATION IN THE TRENTINO REGION

At the regulatory and implementation level, dual apprenticeship was regulated by national decrees and provincial resolutions between 2015 and 2016 [1-6]. The PAT defined the apprenticeship model for the attainment of a qualification or diploma that is in addition to, and not in place of, full-time VET pathways. The model was implemented for the first time in the 2016/2017 school year through the "Garanzia Giovani" programme. The new apprenticeship scheme is aimed primarily at young people between the ages of 15 and 25 and provides three/four years to obtain a qualification/diploma. In addition to the social partners, employers' associations and educational and training institutions, one of the most important players in the process of implementing the dual system is the PAT Department of Education and Culture, which defines the organization, the specializations, the guidelines and the resources involved in the apprenticeship system.

Over the years, PAT has promoted, both at the provincial level and at the national and international level, various accompanying actions to promote dual apprenticeship:

From 2014 to 2017, it participated in the role of leader in the SWORD "School and Work-Related Dual Learning" project, co-financed by the ERASMUS+ program, whose objective was to facilitate the transition from professional training to the world of work, through a comparative analysis of dual training of the various European partners, the launch of pilot

projects and the definition of guidelines to support dual learning paths. The outputs produced by the SWORD project have formed an important methodological basis for the launch of the dual system in Trentino;

- Since 2017, as a member of Action Group 3 of EUSALP, European Union Strategy for the Alpine Macro-Region, he has been promoting the Dual Training Forums;
- Since 2018, participates as a member of the European Alliance for Apprenticeships (EAFA), a multi-stakeholder platform that aims to strengthen the quality, offer and image of apprenticeships in Europe, promote the mobility of apprentices and youth employment;
- In 2018, it signed an agreement with ANPAL (National Agency for Active Employment Policies) for the promotion, development and consolidation of the dual system;
- Also in 2018, PAT issued a call for projects related to the development of dual apprenticeship pathways, in which 10 educational/training institutions participated with 8 projects funded;
- In 2019, it has organized seminars and roundtables directed to institutional actors and different stakeholders to present the implementation and the experiences started in dual apprenticeship in Trentino, as well as to reflect on possible developments and new scenarios;
- In 2020, it signed an agreement with the Chamber of Commerce, Industry, Crafts and Agriculture of Trento (CCIAA) with the aim of developing,



consolidating and strengthening the dual apprenticeship projects through the launch of calls for proposals for the design and implementation of dual apprenticeship programs co-designed between educational/training institutions and local enterprises.

The Learning Atelier initiative aims at consolidating and enhancing the dual system in Trentino and is placed in the context just described, in continuity with the policies implemented by PAT to promote dual apprenticeship.

# 2.2 THE NEED FOR PARTICIPATORY PLANNING INITIATIVES

The interviews with company tutors, carried out in 2019 as part of the DuALPlus project [1], highlighted three main aspects:

- The need, especially for SMEs, to avoid traditional training situations for the training of company tutors (i.e., long hours in the classroom, passive listening situations, excessively theoretical content, etc.);
- The need for greater interaction between the main stakeholders involved in the dual system, primarily the in-company and the school tutors;
- The need to better understand the learning process of students in a dual situation: how to prepare, manage and evaluate apprentices in order to contribute to their growth, not only professional, with a specific focus on the so-called soft skills or non-cognitive skills.

In light of the above findings, it emerges the importance of offering short training paths, which may allow a process of sharing between the various figures involved in the dual system (in-company and school tutors); a process capable of conducting in-depth analysis, especially on aspects related to the management of the learning process during the dual experience in the company.

When planning these paths, it is critical to adopt participatory approaches and working methods alternating transmissivity, group work, restitution, reworking and final synthesis.

The strategies and methodologies used need to be adapted to the profiles of the participants to allow their activation through the sharing and enhancement of their knowledge and experiences. The participants' direct involvement would help, it is believed, the consolidation of "new ideas" and "new knowledge" built together by the group that could appropriate them more profoundly and consciously.

Since the Trentino region's dual system is not fully established and consolidated, and for the reasons just described, there is a need and room for the development of new programmes offering innovative and unconventional training methods capable of encouraging the sharing of ideas and experiences.

The present report illustrates the Learning Atelier initiative as a first step to satisfy the above-mentioned needs.



# 3 GOAL

# 3.1 **LEARNING ATELIER OBJECTIVES**

The Learning Atelier with design thinking workshops aims at three main objectives:

- allowing two or more professional communities to share their professional knowledge, "crossing the boundaries" of their field, to create new experience and practices;
- providing company tutors with a better understanding of the learning processes of apprentices in a dual situation;
- 3. promoting a more active role of the companies.

# 3.2 THE ACTIVE ROLE OF IN-COMPANY TUTORS

In the Trentino region, dual education programmes are mostly under the control of educational and training institutions. This means that school teachers often do the matching between the candidate apprentices and the companies. This might result in some disadvantages:

 School tutors can hold implicit biases about individual students that might affect the matching. In fact, many

- students often behave differently at school compared to how they would at work;
- Students and/or companies might live this mediated decision passively, and this could affect their motivation during the training period;
- 3. The school tutor often drafts the individual training plan and, again, the company could accept it passively without questioning its potential to be effective.

The Learning Atelier aims at offering the first step towards a more active role of the company tutor. This is pursued by creating the conditions so that the two parties (business world and school world) can initiate shared and participatory planning paths.

The Learning Atelier concept focuses on making the involvement of company tutors active and mandatory in order to ensure the co-planning and the co-realization of dual paths. Under this aspect, the Atelier proposal differs from already existing formats in the Trentino region which mostly propose more traditional information-learning experiences.



# 4DESCRIPTION OF THE DEVELOPED PROGRAMME

# 4.1 INTRODUCTION TO THE ATELIER METHODOLOGY

The method proposed for the realization of the training path is the result of the combination of two reflective approaches: 1) the analysis of learning situations and 2) the development of prototypes of activities and practices based on this analysis.

The first approach adopts the so-called "Learning Atelier" methodology, developed in the context of learning psychology [2]. The purpose of the atelier is to ensure that multiple representatives of different professional communities (in our case companies and vocational training centers), through specific inputs given by the trainer, can share their professional knowledge, literally "crossing the boundaries" of their own areas and skills, to create new ones.

The second approach is Design Thinking (DT), a set of specific practices (i.e., questioning, mapping, visualization, etc.) to support the design of activities and services, in this case in the context of learning in work situations.

The integration between the two approaches means that design practices can be located and connected to the activities already carried out by the participants.

The Learning Atelier programme started with a training proposal called "Learning Atelier" (in the original English version, it is "Change Laboratory"). In the Atelier, the work is done in small groups with heterogeneous

composition. One or more facilitators manage the process.

In general, the sequence of activities includes:

- an introductory part in which a problem or an issue to be addressed is identified;
- an active part in which all participants give their point of view in addressing the problem, with the support of the facilitator, presenting their experiences and practices already in place;
- the third part of reflection in which the practices learned and "transferable" by the participants in their work experience is defined;

In all these stages, the Design Thinking approach is used as a tool to support the design of new learning practices. It is in the final phase that the "crossing of boundaries" occurs because a practice previously developed in a specific context is rethought, reoriented and generalized during the Atelier in one or more different contexts.

The result of the laboratory is then the production of one or more "Service prototypes", intended as devices designed to guide and manage the learning of the apprentice in the dual workplace.



# 4.2 **DESIGN THINKING APPROACH**

Design Thinking is a methodology for the optimization of decision-making processes inherent to the solution of a problem. In the Public Administration sector, as well as in profit and non-profit activities, the DT is aimed at developing new services and products.

The basic principle is to make participants' thoughts visible through techniques of non-linguistic representation of information and knowledge developed by the participants.

There are multiple versions of DT. In general, the method is to proceed by layers of representation (one for each work session), and the participants are involved through specific deliveries (i.e., individual, group, classroom) to be carried out within defined times.

In summary, the facilitator helps the group to represent the problem, make decisions, identify the critical moments of a flow of actions, define the end user, the short-term result and the long-term goal.

In the context of the Atelier, the following methodology has been proposed:

- a) define the problem and choose the end-user;
- b) sketch the solution;
- c) decide and make the solution feasible;
- d) design a prototype;
- e) verify the solution with the end-user.

## 4.3 TARGET GROUPS

The main targets of the Learning Atelier are company tutors. As underlined before, to stimulate and foster the exchange of ideas, knowledge and best practices between the two main communities (companies and educational institutions), the presence of school tutors, although in a smaller percentage, is essential. Furthermore, other stake-

holders (e.g., policymakers, managers of representative subjects and associations, representatives of organizations dealing with dual education at different levels) can participate in the Atelier: their presence would diversify the community and ensure even more interesting exchanges.

### 4.4 REQUIREMENTS

The Learning Atelier foresees the participation of in-company and school tutors with experience in managing dual training apprenticeships. Of course, tutors, which are new to this task, are encouraged to join the Atelier since they can make connections and get precious hints. The Learning Atelier is conducted by one or two expert facilitators and foresees the presence of around 30 people; since the physical presence of the participants is crucial to boost meaningful interactions and ensure effective team-working, it is important to provide a location with 3 or 4 rooms for plenary and group sessions. If possible, it would be ideal for taking the event at a company site and foreseeing a lunch break between working sessions, thus allowing participants to network and interact more informally.

The costs of the Atelier (facilitator, location, materials, food) can be covered by the participants or more likely - as in our case - by dedicated funds aimed at fostering dual education.

# 4.5 STRUCTURE OF THE PROGRAMME

The training path is articulated as follows:

Dissemination of information material addressed to participants, with particular reference to the following topics: learning models, motivational models and cases of evaluation relevant to training processes in the dual environment;



- Moment of exchange with all the people involved to break the ice, assess the impact of the provided material and to get to know the participants;
- 3. Series of Atelier workshops based on DT approach. Each Design Thinking Workshop (DTW) is aimed at investigating a particular aspect of a learning process: preparing the students, defining and designing, implementing and evaluating the process of learning.

The organization of a single DTW is common to all the workshops and unfolds in three main phases:

- In the initial part (first 30 minutes), the facilitator first defines a problem or issue to be addressed with brief and concise theoretical references (e.g. preparing for learning one student can be transformed into a real case set in the company or in the school);
- Subsequently (in the next two and a half hours), he accompanies the participants to describe the practices they are currently using to, for example, prepare students for learning. Schemes and representations are realized through the support of DT procedures which serve to define such practices (the atelier approach entails a fixed representation scheme that considers: the object of the practice, the subjects that apply it, the tools they use, the rules that follow, the division of labour and tasks, the point of view of the professional community of reference):
- Finally, in the last hour, the facilitator develops, together with the participants, one sequence of possible practices (e.g., "10 ways to prepare the student for learning in the company") to be applied to address the problem, concluding the collective design process started with the participants.

The outcome of each atelier is a list of practices and strategies to better understand and address that problem; they can serve both business tutors and school tutors for their own professional development and, afterwards the atelier, will no longer be just school or just "corporate", but will be an integration between these.

The set of practices and strategies developed during the series of workshop meetings is the result of the training course: one or more "prototypes of service", that is a toolkit of good intervention practices and methodologies for orientation and management of the apprentice's learning during the dual experience in the company.

A certificate of participation is issued after the completion of the training which is recognized as valid for the mandatory upskilling of in-service teachers employed in the educational and training institutions of the Trentino region.

The next chapter describes how the Learning Atelier was organized in Trento within the DuALPlus project.



# **5 IMPLEMENTATION**

#### 5.1 ACTORS

The laboratory involved the presence of 26 actors: 16 "target" participants, 4 PAT officials from the didactic pedagogical office, 2 observers from the Central Training School, 3 DuALPlus-PAT staff members and 1 expert facilitator: Dr. Maurizio Gentile - Associate Professor of Didactics e Special Pedagogy at LUMSA University of Rome - was engaged to conduct the laboratory which focused on learning processes.

The distribution of the 16 participants was the following:

- Company Tutors (CTs): 4
- School Tutors (STs): 7
- School referents for dual apprenticeship: 1
- Referents for Trentino Federation of Cooperation: 2
- Referents for National Confederation of Direct Farmers (Coldiretti): 2

The active participants (16 "target" participants plus 2 PAT officials) were divided into three groups. The groups were formed by the organizers in a way to guarantee heterogeneity within a single group and the presence of at least one company tutor.

# 5.2 PROGRAMME SCHEDULE

The Learning Atelier was held in Trento at the DIC in September 2020: 1st Tuesday (online), 3th Thursday, 4th Friday and 5th Saturday (in presence DTWs). It lasted 14 hours and was organized according to the schedule described in the next subsections.



Figure 1: a plenary session where two participants present the result of their group work while the facilitator takes notes on the board.

# 5.2.1 DISSEMINATION OF PREPARATORY MATERIAL

On the 26th of Aug 2020, information material was sent to participants with particular reference to learning models, motivational models and cases of evaluation relevant to training processes in the dual environment. The artefacts delivered to the participants consisted of: (a) one document describing the Learning Atelier training path and the foreseen schedule; (b) three video-presentations; (c) three powerpoint presentations with suggested readings ([3,4,5,6]); (d) worksheets; (e) glossary related to presentation concepts; (f) Atelier Mission Statement.

# 5.2.2 ICE-BREAKING WEBINAR ONLINE

On the 1st of Sept 2020, a 2 hours' online webinar involved 12 target participants and the organizational staff in boosting the mutual knowledge within the group and in discussing and evaluating the impact of the given information material. The online for-



mula was chosen to avoid in-presence meetings as much as possible because of the pandemic.

In the context of the Atelier, the methodology described in Section 4.2 has been proposed with three DTWs (red points in Fig. 2)



Figure 2: DT methodology adopted in the Learning Atelier.

# 5.2.3 FIRST DTW: PREPARING THE STUDENTS

On the 3rd Sept 2020, the first 4 hours' Atelier workshop took place: it focused on preparing the students for the process of learning. Initial inputs from the facilitator: focus the attention of students, stimulating motivation before learning, call up previous knowledge, cultivate commitment and perseverance, learn in a work organization.

# 5.2.4 SECOND DTW: DEFINING AND DESIGNING A LEARNING PRO-CESS

On the 4th Sept 2020, the second 4 hours' Atelier workshop took place: it focused on the topic of defining and designing a process of learning. Initial inputs from the facilitator: schedule activities to realize with the apprentice, simulate possible scenarios to anticipate problems/errors, consider the characteristics and needs of the apprentice, define goals to achieve and share them, integrate the needs of production with the individual process of learning. Fig. 3 shows the

layer of representation produced by the group in the second DT session.

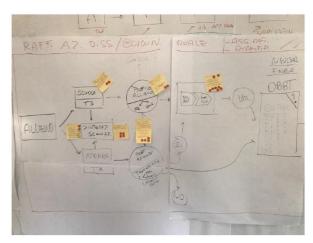


Figure 3: Layer II - general strategy of co-planning for the dual training path.

# 5.2.5 THIRD DTW: IMPLEMENTING AND EVALUATING A LEARNING PROCESS

On the 5th Sept 2020, the last 4 hours' Atelier workshop took place: it focused on the topic of implementing and evaluating the process of learning. Initial inputs from the facilitator: stimulate motivation for learning, monitor the application of the process learning (feedback), develop tools for formative assessment, use the results of the evaluation to improve learning, recognize and validate acquired skills to support horizontal and vertical permeability in the Trentino system and beyond.

## 5.3 OUTCOMES

The three workshops' primary outcome was defining a strategy for co-designing the learning process in the Dual System. This strategy includes four aspects:

- 1. The **end-user**: the learner;
- 2. Three critical moments:
  - a. Direct involvement of STs in the company and Profile of the dual apprenticeship candidate;



- Definition of extended agreements on the territory (Networks) and Company Profiles (What is the ideal learning environment for that learner in that sector?);
- Management and sharing of the cognitive, motivational and evaluative aspects of the training plan ("YES learning", "NO training"), tailoring a pathway to measure;
- 3. A **concrete result:** need for School-Company to co-design the dual education system 2020-21;
- 4. A **general goal**: Attractiveness of Dual Education ("In the company I learn well, I learn a lot").

# 5.3.1 CRITICAL MOMENT (A): DIRECT INVOLVEMENT OF STS AND CANDIDATE STUDENT PROFILE

The main criticality that emerged is the vision of the school towards the Dual System and the need to identify the students based on at least two profiles, defined (provisionally) according to the following categories:

- A. "Fragile and / or at risk of training failure;
- B. "Aware and ready to enter the world of work".

At present, it seems that Dual Education is perceived by schools as a measure to combat early school leaving by addressing mainly students with profile A: therefore, a "remedial" use of this educational path, rather than a training opportunity to improve their learning. On the contrary, the vision to aim for is a Dual System as a learning opportunity for both "fragile" and "aware" students. With this in mind, the GPI working group has advanced the following solutions:

- The STs increase the selection of "aware" students, suitable and ready to enter the world of work;
- 2. Design and implementation of moments of interaction between learning paths in the company/ school, for example: the CT goes to school, the ST goes to the company;
- 3. Reshaping the student profile during the course, to take into account the developments of the experience. For example, one of the desirable (but not necessarily verifiable) scenarios is the transition from a "fragile profile" to a "conscious profile" as a result of the interaction with the working environment. Profiling, in both initial and intermediate phase, should suggest if the chosen company is the ideal learning environment for that specific student and if the latter is obtaining the expected cognitive and motivational gains from experience;
- 4. Define the individual learning plan as a result of a *shared work between* the company and the school.
- 5. The final evaluation of the path is also the outcome of the sharing between companies and schools using *self-assessment and simulated interview tools in presence of companies.*

# 5.3.2 CRITICAL MOMENT (B): DEFINITIONS OF COMPANY PROFILES AND EXTENDED AGREEMENTS ON THE TERRITORY (NETWORKS)

The second criticality regarded the ideal environment for a given student and sector. In particular, two critical issues were discussed by the group:

A. How can schools establish stable relationships with the production system (distinguishing between maintenance and manufacturing companies) so as to form networks of



- schools-companies dedicated to the dual ([7])?
- B. How can companies attract and maintain new human resources and transfer youngsters' skills to new employment options?

The GP2 working group, dedicated to this second point, put forward the following solutions:

- Establish a Dual Network made up
  of school referents, company trainers, Vreferents for the Chamber of
  Commerce and Trade Associations
  contact persons. The main activities
  of such network could be: (a) the setting up of a stable working table to
  ensure the alignment between
  schools and companies over time; (b)
  developing a plan of proposals to inform and raise awareness on dual
  learning opportunities in the community;
- 2. *Profiling the company* according to three categories:
  - a. "Micro companies" with high learning opportunities;
  - b. "Small companies" with good employment opportunities;
  - c. "Medium-sized companies" with excellent employment opportunities.
- 3. *Training of company representa- tives* with the goal of obtaining a sort of "Training Structure" certification.

# 5.3.3 CRITICAL MOMENT (C): MANAGEMENT AND SHARING OF THE TRAINING PLAN

The third criticality concerned whether the Dual System should be considered as a form of job training or, more strictly, as a learning process. In particular, two critical issues were discussed by the group:

A. How can the company support the student's motivation?

B. How to give direction and evaluate the learning process in the dual-path?

The solution proposed by the GP3 working group implies that *schools and company tutors should share the training plan and the operational procedures for managing the dual path.* This solution consists of:

- 1. For the student's profile (fragile, aware, etc.), define:
  - a. learning mode;
  - b. methods of reinforcement and self-evaluation;
  - c. time in the company for reelaboration;
  - d. on the basis of the criticalities observed, redefine learning modes.
- 2. Support the company:
  - a. in defining times and spaces to dedicate to the learning path of the student;
  - b. in the step-by-step evaluation of the path shared between CTs and STs.

Also for this third critical moment, the general management strategy of the dual path implies an increase in the interaction between the school and the company. This interaction takes place when CTs and STs support the student's motivation through reinforcement and evaluation.



# **6EVALUATION**

# 6.] PARTICIPANTS' FEEDBACK

As illustrated in the previous chapter, the Learning Atelier actively involved around 2 service officials and 16 people between school and company tutors and other referents.

At the end of the programme, the project staff sent an online survey to the participants to collect insights about their training experience. The survey consists of 5 items on:

- a) logistics;
- b) instructional materials;
- c) reactions and satisfaction regarding the coherence and clarity of the proposed contents, the conduction of the facilitator, the methodology used (design thinking), transferability of the proposed solutions;
- d) future training needs
- e) open question for remarks and comments.

The survey respondents were 14 and the results revealed a positive feedback: the 64,3% of respondents were highly satisfied with the item a) and b). On item c) an average of 75% declared itself highly satisfied, apart from the perceived transferability of results, which are judged slightly positive (50% of highly satisfied respondents).

Considering the future training needs expressed in the survey, three main categories have been highlighted:

a) design of learning processes; b) exploring students' needs for learning readiness; c) learning evaluation (see Fig. 4).

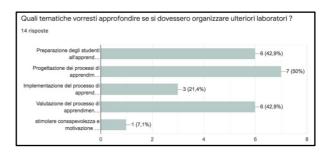


Figure 4: answers to the question: "what issues would you like to explore if further workshops were to be organized?".

Among the comments, it has emerged the need for promoting such training opportunities and a greater exchange with companies that have an interest in dual apprenticeships. On one side, a school tutor said: "planning and sharing the dual training path with company tutors stimulates me a lot. So far we have worked trying to share as much as possible but the basic language was the scholastic one." On the other hand, a company tutor stated: "we need a greater involvement of the company tutor in training and exchange with peer tutors", and again: "we see no obstacles in terms of organizational aspects, but only commitment and dedication on the company tutor side in transmitting passion for work to the student".

Therefore, it seems crucial to develop a common and shared language as a base for an effective participatory planning process. Company tutors are willing to play an active role in the dual system!

Finally, while discussions among the working groups and the facilitator were extensive and deep, more time was needed to the conclusions phase.



## **7 LESSONS LEARNED**

# 7.1 HINTS FOR THE FUTURE

Of the five phases envisaged by the DT workshops, in the 12 hours available, the first three were carried out: defining, sketching, deciding. The Atelier development would imply a work of continuity aimed at the prototyping and verification of the solution, respectively, phase four and five of the DT.

Below are some indications for the future:

- It is suggested to conclude the work cycle of the DT with the prototyping and field verification phase of the general strategy of co-management and design of the Dual Education path. This first activity involves recalling the group that participated in the September 2020 three-day workshop into the classroom.
- 2. Consequent to the first point, it is suggested to define an adequate number of hours to deepen the learner's co-design and management's operational details along the four key moments of Dual Training: prepare, directing, motivating, evaluating learning. It is necessary to reinforce the group with a more consolidated language and knowledge base (see the video presentations dedicated to the themes of learning, motivation, evaluation and related glossaries).
- 3. Given the training activity's success and the feedback received, it is suggested to organize DT activities to be offered to STs and CTs engaged in the training and learning-to-work paths, within an annual/biennial schedule. This measure can be adopted to raise

- awareness and change the Dual Vision (from a remedial form of intervention to a real learning opportunity);
- 4. As an antecedent or consequent to point 3, define a more intensive awareness-raising campaign aimed at schools, companies and job consultants to promote more excellent "attractiveness of the Dual System". The message of the campaign could be: "In the company, I learn well, I learn a lot";
- 5. The number of company tutor participants was adequate; however, school tutors and other figures were prevalent in numbers. It would be recommended to intensify the promotion of the Learning Atelier training path within the companies, taking into account some of the solutions emerged during this experience (e.g., recognizing company tutors training).

# 7.2 FAMILIES OF STRATEGIES FOR MANAGING LEARNING PROCESSES IN THE DUAL CONTEXT

Another lesson learned is the generative power that the Atelier can have in learning practices for students in work environments. As already stated, the main processes in the Atelier were:

 introducing and preparing the student/apprentice for the learning experience in the company;



- planning the learning activities in the company;
- managing motivation for learning in the company;
- evaluating learning in the company.

Each of these processes can be addressed, considering the point of view of the organization that hosts the apprentice in the learning phase, and therefore considering the company tutor as the prevalent one, through the use of strategies and relative activities/techniques, which can be applied at strategic moments of the learning experience.

The strategies, being generative for the identification or reshaping of the activities to be proposed to the learner, can be framed within the concept of a "family" of strategies, in which:

- Each strategy can be linked to another through the activities/techniques proposed;
- All the strategies can generate other strategies through the combination or integration of pre-existing ones;
- There is a "leading thread" or elements characterizing the strategies and activities present within;

Based on the learning atelier outcomes for DUAL PLUS, it was possible to identify a first family of strategies, considering the four strategic processes previously indicated.

In the following table, it is possible to synthesise the two strategies proposed for each of these processes.

Processes for manag- ing the learner	Family of Strategies
Introduce and prepare the learner for the on-farm learning expe- rience.	"Give the apprentice citizenship."  "Give the apprentice a group."
Plan in-company learn- ing activities.	"Let us build learning goals together."
Manage motivation for learning in the company.	"Models are important" "Let us enrich the work."
Evaluate learning in the company.	"Feedback that makes you think."
	"I evaluate you so you can grow. Formative assessment."



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