

Practice	Project work in distance learning
Source/Link	
Country/region/city	Italy - Piedmont
Time frame	March – June 2020
Sector	<input checked="" type="checkbox"/> VET <input type="checkbox"/> School education <input type="checkbox"/> Higher education <input type="checkbox"/> Continuing vocational training <input type="checkbox"/> Other (spec. _____)
Target group	<p>Young students (14-18 years old) at the end of a qualification course (EQF 3) who have to obtain the final certificate.</p> <p>All the classes in EnAIP took part to this practice.</p>
Short description	<p>During the pandemic period, VET courses were delivered in distance learning, no laboratory activities were allowed and it was not possible to send the students on internships. In order to obtain the qualification they had to produce a project work developing a product (tangible or theoretic) to present during the final exams.</p> <p>In this scheme, we present a best practice which has involved the third class of the course “Electrical Operator – specialization in industrial automation” in the ENAIP VET school in Rivoli.</p> <p>Students were divided in 3 groups (4 students per group) and to each group were asked to simulate to be a company in the field of industrial automation.</p> <p>Students decided their roles and each of them was responsible of a specific task. EnAIP was the customer who asked for a commercial offer based on some specifications. The simulated company could produce an offer as a contract.</p> <p>Tutors and trainers defined a timeline of tasks carried out through virtual and syncro lessons to all students, virtual coaching and tutoring in small groups (the company), working groups among students (collaborative learning).</p> <p>The tasks:</p> <ol style="list-style-type: none"> 1. Commercial offer 2. Company description and organization (in IT and English) 3. Technical aspects connected with the industrial machinery design process (flowchart, electrical and pneumatic diagrams, PLC design, budgeting and invoice, machinery chemical storage report). <p>The output of the activity was:</p> <ul style="list-style-type: none"> - Final report on the project work (containing the self-evaluation of the activity by the students) - The technical report regarding the professional task (automation system) <p>During the final exam, they discussed about the project work.</p>
Methodologies and animation techniques used	<p>The project work is a methodological approach – attributable to active learning methodologies – useful and effective to:</p> <ul style="list-style-type: none"> • develop soft skills such as management attitude, problem solving, stress and time management through a situation in which each student has to develop a task putting their knowledges, abilities and resources into practice;

	<ul style="list-style-type: none"> • test and apply skills on specific professional tasks in order to produce an artifact, a final product, tangible or intangible. <p>In VET environment project work is developed starting from a situation-problem expressed by a real professional context on which a pertinent and applicable proposal is made.</p> <p>The activity to be developed is based on a need to satisfy, which has to be identified, analysed, defined as a problem.</p> <p>Active engagement of the students during all the project is strongly incentivated. They're responsible on the results.</p> <p>Tutors and trainers are facilitators and animators who support groups in overcoming difficulties using their personal resources and skills.</p>
Digital solutions used	<i>Synchro lessons through learning platform (Microsoft teams)</i>
Contents/issues on which methodologies and animation techniques are applied	<p>Distance learning setting:</p> <ul style="list-style-type: none"> - synchro lessons and ppt presentations (fixed appointments) to share technical aspects and to present tasks. They were recorded and available. - job meetings (each company) to develop the projects - instant messages and chat (teams and WhatsApp) to maintain communications among students and with trainers/tutors - repository folder to place all the materials and documents produced by the students - face to face activities in small groups - evaluation and self-evaluation assessments <p>The project work was applied to practical and professional subjects but on the design aspects and without the possibility to create practically the product.</p>
Technical equipment	<p>In distance-learning:</p> <p>internet connection, account microsoft to use TEAMS, software to produce technical tasks (downloaded on each student's personal PC).</p> <p>TEAMS for documents repository and synchro lessons.</p>
Experiences, findings, results, lessons learnt (Project internal view)	<p>Positive surprising experience: thinking about the target groups of our courses the results pursued have been out of the expectations. All students became passionate about business simulation.</p> <p>Giving and taking responsibility within the company has fostered the participation and engagement. Students spend lots of time and energies and they felt that project work – based on a real situation and task – was useful for their future job inclusion.</p> <p>The value of the methodology was tested and now the challenge is to implement it in an onsite learning setting.</p>
Strengthen	<ul style="list-style-type: none"> - Working groups activities facilitate the self-organization and self-engagement but also make more effective learning through a peer-to-peer approach (students with better skills helped those who were more vulnerable). - Project work represented an effective and engaging methodology to develop professional skills both in a distance learning (when no face-to-face meeting were allowed) and onsite.
Weaknesses	<ul style="list-style-type: none"> - Lack of assessment methods to evaluate the engagement and quality of a single student. - Time consuming (for trainers and tutors)

	<ul style="list-style-type: none"> - Internet connection and equipment of the students (some students hadn't internet connection and EnAIP paid for connection mini-contracts and made PC available on loan for use) - Lack of digital solutions: in integration to syncro lesson no other digital solutions were applied
Other relevant information	
Comments	<p>This practice is relevant because it points out the need to involve students in developing a task finalised to produce a final product that could be tangible or intangible and represents a challenge. Working on a final product stimulated engagement and commitment. The challenge involves students.</p> <p>This practice learns the importance of a process: to facilitate learning from experience and learning work processes it's necessary to supports students (through active learning) to identify and apply their skills in a specific and real (or realistic) situation.</p> <p>Regarding digital teaching and learning, the project work approach works! The project based learning can be the approach/methodology that supports the development of technical and practical professional skills. Moreover, using digital and interactive solutions make syncro lessons more dynamic and engaging.</p>
A contribution by	<i>EnAIP Piemonte</i>