Permeable borders between school and work

The case of the multimedia communication laboratory "M3Lab" - I.I.S. Des Ambrois (Oulx, Turin)

1. The context

The I.I.S. Des Ambrois is a secondary school, located in a mountain municipality of the Province of Turin (Oulx, Piemonte Region). The Institute includes several lines of study: Lyceum (Scientific of applied sciences and sports, Classical, Linguistic); Technical for Tourism and Vocational. The latter is structured in two sectors (Multimedia Communication and Design).

The municipality where the school is located is near the geographical border between Italy and France.

The location of the school is probably also reflected on teaching, in the sense that, starting from the place in which we are, it becomes almost a necessity to reflect and incorporate the liminal dimensions (geographical, in fact, but also social and cultural) in teaching practice and in the reflections that guide it.

In 2017, some teachers of the Vocational section drafted and presented the "M3Lab" project, within ERDF - PON 10.8.1 - "Innovative educational workshops", "Vocational laboratories" sub-action. In 2018, the project was approved and funded by the Ministry of Education, University and Research (MIUR).

The project involves the redevelopment of two laboratories already existing in the Institute (through the purchase of new instruments and furnishings). Although the focus of the intervention refers mainly to the infrastructural dimension of the laboratory, the design focused on integrating this dimension into a broader educational vision. In particular, the infrastructures have been contextualised in the design of an innovative learning environment, which can also function as an interface between the educational reality and the world of work, with particular attention to the territorial context in which the school is located.

The intervention is currently underway and is aimed at the pursuit of two macro-objectives:

- Allocate more effectively the resources made available by the EU, enhancing the use of the laboratory in extra-school hours and in work-study program activities.
- Strengthen the territorial network of the Institute, activating new links and possibilities for collaboration with stakeholders, in order to promote the acquisition of skills and vocational experiences for students.

2. M3Lab - Widespread Multimedia Communication Laboratory

M3Lab (Multimedia, Multitasking, Multispace Laboratory) is intended as a widespread laboratory: located in various physical environments, connected to each other through the Institute network and the adoption of online storage tools for the work carried out. In this way, it is possible, for example, to produce photographs or videos, to realize a first post-production or to check the results during the shooting phase; to continue post-production in other school laboratories; to encourage the adoption of inter-or multidisciplinary methodologies; to enhance accessibility to tools and resources, in order to increase the chances of developing vocational skills.

The laboratory consists of three main groups:

- the former Laboratory of Photography and Video Shooting of the Institute;
- one of the school laboratories equipped with PCs (24) and professional software for graphic design and photographic and audiovisual post-production;
- a mobile laboratory, consisting of 20 tablets and a refill and transport cart, which can be requested by the teachers and used in any of the classrooms of the school.

The first group was strengthened with the purchase of new shooting and post-production instruments. In this way, the possibilities for students to produce multimedia content (e.g. through the creation of immersive photographs and virtual tours) have been expanded. The purchase of the tools was complemented by a rethinking of the furnishings and the structuring of the physical space of the laboratory. The design was inspired by the principles of teaching 2.0, structuring a learning environment that could encourage the adoption of participative and collaborative teaching methods (e.g. cooperative learning, flipped classroom, learning in simulated or real situations).

About the second group, the intervention was aimed at expanding and improving the possibilities of use of the laboratory, encouraging forms of collaboration between the students of the two lines of study of the Vocational Institute. The laboratory, in fact, is currently used mainly by the students of the Design sector. The project envisaged, on the one hand, the acquisition of a laser printer, intended for the design of prototypes (thus improving the acquisition of vocational skills for these students) and, secondly, the updating and replacement of the computer equipment available, in order to make the laboratory accessible also to the students of the "audiovisual and multimedia productions".

The third group, intends to encourage the use of digital technologies and online resources in the teaching of different disciplines, both in those specific to the lines of study, both in those of the common area.

Through the network connection (available in all the premises of the school) and the adoption of resources for cloud storage, these units are connected to all the premises of the school: using a laptop and a projector, for example, you can get back the contents produced in the laboratories also in the "traditional" classrooms.

The design of M3Lab was oriented, therefore, to the structuring of links among the infrastructures (physical and technological) of the school. Secondly, the goal was to build links also on the cognitive and educational level. Making the disciplinary, didactic, methodological boundaries and those of the different lines of study of the Institute permeable is the first step for the structuring of a learning environment open to comparison and collaboration: a fundamental condition for the acquisition and development of vocational skills.

3. Design permeable boundaries between school and work

The next step in this process of "permeabilization" of the borders concerns two areas - that of the school and that of work – whose difference is probably the most critical point in the adoption of effective teaching strategies, with a view to fostering employability of students.

Doing school means helping to build society. The construction of tools to establish or deepen links with the world of work is part of this process, in the sense that the school should not only provide the opportunity to develop technical, but also cultural and social skills to relate to work, intended as a constituent part of the society itself. The adoption and strengthening of collaborative and cooperative teaching methodologies is fully part of this perspective. This assumes a very special value in a macro-sector, such as that of cultural production, where the demand for highly specialized technical skills is accompanied by the need to know how to deal with work groups and with different skills from strictly technical ones.

Furthermore, the dual relationship between school and work cannot develop in a univocal logic, in the sense that the school must exclusively train the skills required by the market, in a sort of continuous "pursuit" of what happens outside of it. This is obviously a necessary process, but probably not sufficient to guarantee an effective teaching action. The school can aspire to be, in addition to the place in which to experiment solutions to real problems, the place where the needs of the market are related to their need for development:

- Technical: area in which university training or that of Higher Technical Institutes certainly have more weight;
- Rational and relational: as previously stated, the development of vocational skills does not take place exclusively within the technical dimension, but also involves learning to stay (and work) with others; learning to compare technical knowledge with those developed in other disciplines; discussing and experiencing the rational implications (regarding the organization of work, for example) and ethics that all this entails.

With particular reference to these last dimensions, the acquisition of vocational skills also involves the acquisition of cultural and citizenship skills and, precisely in this sense, it falls within (or should be included) in the objectives of Secondary Education.

In the case of the laboratory we are talking about, the first step in this direction has been stated through the stipulation of an agreement between the school and the CNA (National Confederation of Crafts and Small and Medium Enterprises) in Susa (Turin), a municipality located in the same valley where the school is. In 2014, the CNA of Turin (in particular, the local branch of Susa) gave birth to "Valsusa Laboratory", a territorial marketing project, developed with the aim of promoting the businesses and the territory of the Susa Valley, its artistic, natural and enogastronomic excellences. The project enhances the sense of belonging and community, networking the companies and the main social actors of the territory (Schools, Local Authorities, Associations, Citizens), promotes the will to do business and accompanies companies in the process of digitization.

The collaboration between Institute Des Ambrois, CNA and Valsusa Laboratory is aimed at companies available to realize or renew their corporate communication/image in collaboration with the school. Students and teachers, based on business needs, will work on the coordinated image company (logo, business card, letterhead, etc.), on the website, brochures or other advertising material. Carried out during the work-study program, and then during school hours, the project will allow students to experience the reality of the working world on a side, on the other hand to companies to take advantage of a professional and unique service in its kind.

The activity is underway: it will be carried out during the 2018-2019 school year. This is the first step towards opening the M3Lab laboratory to integrated learning experiences between school and work. The aim is twofold: in the short to medium term, to consolidate the possibility of developing such experiences and, in the medium to long term, to structure a learning environment that can accompany students even at the end of their studies, offering a sharing space of resources (technical, cultural and relational) capable of supporting the development of professionalism by students, also with a view to developing self-entrepreneurship.

A 3D preview of Laboratory of Photography and Video Shooting, realized by a student of the Vocational School (Emanuele Scapellato). The preview is a part of the Institute Des Ambrois' virtual tour, realized by another student (Edoardo Pivi).