**Innovative teaching methods in ISTAT**

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**Abstract**

In the last years Istat invested in experimentation of innovative teaching methods and tools, aiming at building up learning environments based on the integration of “traditional” tools with Technology Enhanced Learning resources. Within this context, an e-learning platform was set up in order to promote the statistical culture and innovative teaching methods and to develop and enhance statistical skills. E-learning and blended-learning courses are characterized by an innovative instructional design. Videotutorials, videolessons, webinars are some of new teaching formats tested recently to enrich our training programs.

These new innovative teaching methods and tools:

* support Istat modernization, promoting and facilitating the change
* favor the statistics dissemination expecially in the National statistical system
* improve training to the data collectors, allocated to all the Italian territory

E-learning methods are clearly connected with the competence system and the projects involved in it as 360 feedback, survey on occupation and so on.

The paper will describe the e-learinig platform focusing on the main methods and tools used in Istat. Paper will analyze also main advantages and critical issues of these new training methods.

**INTRODUCTION**

In recent years, Istat has invested in experimenting with innovative teaching methods, with the aim of building learning environments facilitating the circulation of knowledge through an integrated use of "traditional" tools and Technology Enhanced Learning resources. The aim was to create a network of training-knowledge opportunities integrated each other and aimed at professional growth, continuous development of knowledge and statistical culture. Therefore, e-learning and blended learning methodologies were tested, and an e-learning platform for statistical training was developed.

**1. Why has Istat decided to introduce forms of e-learning and blended learning?**

* Because it has a wide and diversified internal user (statisticians, informatics, jurists, etc.)

- Because the training is aimed to a widespread use in the territory: not only the ISTAT regional personnel but also the regional statistical system one (and therefore the statistical offices of municipalities, provinces, regions, etc.).

* Our learning paths are also addressed to the detection networks and then to the data collectors of the individual surveys.  
  - To optimize both training products and learning costs: the e-learning contents can be enjoyed by a wide audience directly from PC and are therefore available in the training calendar if the training requirement persists.  
  - But above all because **we believe that through e-learning a quality training can be achieved.** This is possible only in the case that you know not only the opportunities offered by e-learning but also the constraints, as we’ll see later.

**2**.  **Which teaching methods have been tested?**

The teaching methods introduced are the following:

* E-learning
* Blended-learning

**2.1 E-learning**

Three different "formats" were experimented: webinars, videotutorials and videolessons, virtual classroom.

* + 1. **Webinar**

Webinars are a consolidated reality in our training offer. They are information and training initiatives taking place exclusively online, lasting an hour and a half.

*We make use of it:*

* as a tool of Knowledge sharing, to share innovative projects and research activities promoted and implemented within our Institute
* To introduce complex training initiatives
* To deal with some specific educational content in a blended path
* To share PhD thesis of ISTAT staff on leave
* To return the main didactic contents of training courses followed by a few colleagues, organized by external bodies (eg ESTP), but particularly interesting for our audience.

Webinars are held live and allow the participation of the audience through the chat.

Normally to the questions received via chat, the teacher answers at the end of his intervention.

On average, around 80 users participate in webinars.

* + 1. **Videotutorial and video- lessons**

The tutorials are mainly used for educational initiatives for the use of computer systems, platforms and software

Tutorials have also been used as tools to support organizational change.

Istat has recently been engaged in a major process of internal reorganization. The videotutorial were created to promote and make known the new systems adopted to the staff.

This is a training involving a large part of the ISTAT population and responds to a current information needs of colleagues. This is why the videotutorial tool has proved to be particularly effective, because it is timely: it remains available even after the system is launched and each colleague can watch it when needed.

The video-lesson, unlike the tutorial, has a mostly theoretical-methodological content. We use them both for self-supporting training initiatives and for blended training courses. The duration of the video lessons is crucial for its quality and effectiveness, as well as careful design of the content. A video lesson should not exceed 5-7 minutes. The videolessons are made with a graphic that allows you to graphically zoom the image on important contents, and overall it is pleasant and effective from an educational point of view.

**2.1.3 Virtual classroom**

The virtual classroom allows to realize a course exclusively online in synchronous mode. It is an educational formula especially useful for courses dedicated to colleagues scattered across the territory. The advantage is to reach large slabs located on the territory by reducing the costs of the missions, on the one hand and solving the problem of the lack of classrooms on the other.

The danger is that of making an ineffective training if it is not accompanied by a careful and "aware" didactic planning of the limits of the technological instrument.

Often we happen to attend virtual classrooms lasting a full day, which replicates the design structure of the classroom training. This invalidates the effectiveness of e-learning. While in the classroom there is the teacher who, with his ability to manage the classroom, with his sympathy and dialectic involves the participants, all this is not there online . There is no direct contact with the teacher. So we need to pay close attention to the training design that must be realized in the awareness of the opportunities of e-learning but also of its limits.

The virtual classroom courses offered in Istat:

* they are divided into half days of training , lasting maximum 30 minutes, so as not to "weigh down" the distance lessons. The theoretical-methodological interventions are constantly mixed with practical exercises. The exercises are held either individually or in groups. In the latter case they are held in 4-5 virtual classrooms, with small groups (4 people) and supervised by a tutor who enlivens the discussion and solicits the interventions. This, can be a mean to promote the sharing and "focusing" of the course contents avoiding the coldness and impersonality of the solitary pc station;
* they provide exercises and project work on the platform for statistical training over a period of several weeks;
* they foresee a follow-up in the virtual classroom in which the results of the exercises and of the project work are presented and space is given to the virtual debate. This is to guarantee a further moment of confrontation with the group of teachers;

The strength of the virtual classroom is just the varied and flexible program, which allows a high participation and a strong involvement of the participants, even though “ virtual”.

* 1. **Blended-learning**

Blended-learning training consists of the integration between tradition (classroom) training and e-learning training. Part of the training - usually the theoretical-methodological one - is delivered in the presence; part - generally the most practical experiential - takes place at distance, in e-learning mode, through video lessons provided by the platform for statistical training and ,above all, through the collaborative tools of the platform: tests, exercises, project work, etc.

The e-learning platform is a great opportunity, both from an educational and organizational point of view as a whole. It allows the creation of articulated and flexible training paths, but also targeted to specific needs.  
From an educational point of view:

1. It enriches the contents and exercises by making it varied and flexible because in addition to classroom training, learning is enhanced with videos and exercises;
2. It extends training time, allowing the contents to settle: a classroom course taking place on average in 3 days, on the platform lasts about 3 weeks, due to the fact that it consists of various didactic contents;
3. Encourages the virtuous exchange between teachers and learners and among the latter within them, through collaborative functions. In particular, Istat courses provide for forums with teachers that work as an open window where the learner can pose doubts and perplexities. It is an effective tool especially at the time of the tests in which the uncertainties of the learner emerge. The forum is the place of interaction between the learner and the participant, together with the follow-up taking place at the end of the training course in the virtual classroom.

The chat, however, plays- as in all platforms - the role of exchange between learners.  
There are several advantages for the organization:

1. Organizational flexibility allowing to break down space and time constraints  
2. Perennial availability of educational content. An archive of online learning materials is created ,available to everybody.

The network, not only a simple container of information, is transformed into a collaborative and cooperative environment, in which all the subjects virtually involved become the learning actors. The scaffolding allowing the construction of this complex virtual training universe is the platform, which allows not only to provide real training activities, but also to organize and implement learning complementary to the virtual classroom and then to go beyond the AULA, towards a "liquid" and open concept of knowledge.

1. **References**

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