Statistical literacy:
a key to comprehend a changing world

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**Keywords:** statistical literacy, governance, standardization, guidelines, comprehension, institutional cooperation

# Introduction

As often reported in scientific literature, statistical literacy is the ability of individuals or groups to understand statistics [1]. The task of the Central Directorate for the Development of Statistical Information (DCSI) at ISTAT, is to develop the statistical literacy from the demand side, i.e. to promote in citizens, enterprises and institutions the capacity to use statistical information both for making informed decisions and evaluations for work and for everyday life. Much of the development in demand can already be found in the available statistics. To this the possibility of personalized responses through the achievement of a second objective must be added, establishing a direct relationship with users so as to give tailor-made responses to their requests and have a relationship with them that lasts over time.

The growth in the skills of Istat as a provider consists in understanding what lacks in the offer, adapting what is available and bridging the gaps. Consequently, in the relationship between supply and demand, it is necessary to see what ISTAT already has in its "bundle" of supply as a producer of that particular public service which is the statistical knowledge of what we have around it. In addition, ISTAT should be prepared for the latent demand for new information, following new themes, for example by preparing informative-learning material on the Bes project (Equitable and Sustainable Well-Being [2]), some of the indicators are actually included in the Italian Economic and Financial Document.

## Relaunching the activities of statistical literacy

In 2017 the project for the development and relaunch of statistical literacy was started, passing from an activity of promotional events (as it was previously), to initiatives on the territory, with the a new Working Group for the development of statistical culture on the territory, which collaborates with the director of DCSI to develop strategies and projects and helps to implement them at territorial level.

## A four axes strategy

Statistics as a key to understand the world around us inside and outside the school and university, not limited to the basic concepts of statistics, but active in a cross-section way in school and as a game in free time, or for extra-work competencies for the adults.

* Proposals for a pervasive and reasoned use of statistics in all curricular subjects at school: humanities, social sciences, STEM disciplines; statistical and quantitative literacy.
* Statistical toolbox, a contribution to critical reasoning, recognition of regularity (patterns), capacity for statistical synthesis, interpretation of reality through models: numeracy.
* Statistics not limited to the school channels, but also in funny ways: gamification
* Development of interest and quantitative literacy of adults: lifelong learning and adult competencies.

**1.3 The initiatives**

In the overall project of re-orientation of the activity, as a prerequisite the initiatives must be standardized/-able and uniform at territorial level so as to make ISTAT appear with a unique manner. The proposal is therefore for a strong governance of the activity.

* Top-down initiatives: they start from DCSI and reach the territorial network in a standardized and coordinated way, improving the image of ISTAT on the supply side, i.e. as a producer of the knowledge service offered by statistics.
* Bottom-up initiatives from the territory: each regional project is filtered, evaluated, and, if necessary, modified by the network coordinators, then becomes a “central” project and, as a standard is carried out on the territory. This is a way to put into production a “new chain” of products activated by territorial demand.
* One-shot initiatives: they start at territorial level and are not valid for the entire national territory, so cannot be repeated because of their peculiarity.

**1.4 A new organization of existing training materials on the website**

As in the case of the initiatives at the territorial level, a standardization activity needs to be carried out as well for training materials. Lot of materials have been produced over the years, sometimes with different results. They should undergo a new assessment and reorganized on the site, with short presentations, then made usable and standardized for users, divided by age groups. Factsheets/Information sheets should be prepared for statistical data suitable for use in the various curricular subjects (such as “History with Istat”, using long time series, taking as the model of the materials of the US Bureau of Census [3]) for both teachers and students.

# Methods

Most probably nothing has to be created, on the other hand what already exists must be taken up, both as far as materials are concerned and both forsimilar initiatives already carried out, to be used as good practices. Synergies must be created between what exists at supranational level (Guidelinesof international organizations) and at international level (good practices of other NSIs) and network activity needs to be started or continued if already existing, linking up at national level with literacy and active citizenship initiatives in other sectors which already do exist in Italy, such as financial literacy and economic education projects.

* Prepare identifiable, replicable and standard formats for the initiatives described above. Prepare checklists of things to do and to avoid, circumscribed to the sectors described above.
* Use as a guide the volume of theUnece series *Making Data Meaningful Part 4: A guide to improving statistical literacy*. Prepare an Italian edition, following and adapting the international edition to the Italian situation.
* Take as an example the actions and materials developed by the [Comitato interministeriale per l’educazione finanziaria](http://www.mef.gov.it/ufficio-stampa/comunicati/2018/comunicato_0063.html) [4].
	1. In May, the beta version of the website [quellocheconta](http://www.quellocheconta.gov.it/it/), [5] was released, where examples of materials produced according to the strategies of the Committee can be found.
	2. A Survey of financial education initiatives in Italy in the three-year period 2012-2014 has been produced (published 2017) [6]
	3. A [census of the 2018 initiatives](http://www.mef.gov.it/ufficio-stampa/comunicati/2018/comunicato_0067.html) has been relaunched with the aim to identify and possibly avoid overlaps between exixting activities and products
* On June 11, with his presidential address for the Consob Annual Report, the Chairman Mario Nava [7] relaunched the objective of improving financial information for informed investments as a factor for growth and competitiveness.
* Activate synergies and collaborations with the [European Association for Economic Education](http://www.aeeeitalia.it/wp/category/home/) [8].

# Results

Results are obviously not available yet. The overall project is still at an early stage. As far as the parts of Territorial network and standardization of initiatives, an assessment will most probably be given at the end of the Italian Thirteen National conference of statistics (4-6 July 2018).

# Conclusions

A relaunch and a better coordination is being expetcted both at the national and the local level, with a relevant increase in visibility and a growth in data supply.

# References

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7. Mario Nava, [Speech by the Chairman](http://www.consob.it/documents/46180/46181/dsc2018_en.pdf/7efe2e33-2d2b-481c-bc00-64c3e3f272c8), Consob Day 2018, June 11 2018, last accessed June 14 2018.
8. [AEEE](http://www.aeeeitalia.it/wp/category/home/) (2018), last accessed June 14 2018.
1. Istat, Italian National Institute of Statistics. [↑](#footnote-ref-1)