A PROPOSAL BY ISTAT TO SUPPORT THE TEACHING OF STATISTICS IN PRIMARY SCHOOL

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THE CONTEXT AND THE OBJECTIVES
The Italian National Institute of Statistics (Istat) promotes statistical literacy both at a
national and at a regional level, and has always paid particular attention to the school system. In
addition, the school system itself recognizes that citizens of the knowledge society need to have an
adequate level of statistical literacy. School curricula, in fact, deal with Statistic from the early
years of compulsory education, with the aim of promoting a gradual learning of those skills needed
for the correct use of data. Istat recently decided to give a new impulse to the promotion of
statistical culture, implementing initiatives for the younger generation through the school system.
In this work we intend to illustrate the methodology and present some tools specifically designed to
support the teaching of statistical curricular topics in primary school.

THE FRAMEWORK AND THE PROPOSED APPROACH
Istat recently built up a specific network of experts to promote statistical literacy at a local
level. The network works in synergy with the Advanced School for Statistics and Socio-economic
Analyses of Istat (SAES), recently established with the institutional task of developing statistical
literacy at various levels. The driving idea underlying the work was to address children through the
mediation of their teachers, by providing – by free download from the website of Istat-SAES –
some learning tools, ready to be used by teachers in their classes.

METHODOLOGY
The first step of the work focused on a careful analysis of school curricula in force in
primary schools, in order to create a proposal that teachers could consider relevant and up to date.
From this analysis, we obtained precise references to core topics to propose.

We decided then to design learning tools in accordance with three basic requirements: the
first one was the need to pay particular attention to the presentation, considering the age of the
target group, (6-11 years old). The second was about providing the possibility of doing exercises
on the topics, to reinforce concepts through application. The third requirement was the option to
use these tools in a flexible way, in order to make them suitable for use both with or without
multimedia supports. This ensures the highest level of freedom for the teacher.

THE RESULTS: STRUCTURE AND CONTENTS OF THE TOOLS
In the final realization, learning materials are structured as thematic dossiers and cover the
following topics: one-way and two-way frequency tables, pictograms, bar charts, arithmetic mean;
mode, introduction to probability. The structure of these dossiers respects the same format, each of
them in fact includes:
• an interactive Power Point presentation that introduces the topic in a friendly way to pupils;
• a set of thematic exercises in Excel, with input cells for the children's responses, and output
cells to report to students whether the answer is correct or not;
• a technical note, in text format, containing information for further study, specifically designed
to give further information to teachers.
A concise guide for the correct use of the tools is also available.

CONCLUSIONS
With this organized collection of didactic instruments, teachers can access a proposal for
an organic path of work. They can take advantage of a concrete support for the teaching of
curricular themes in Statistics during the course of study. The wide margin of freedom in choosing
the depth of study respects the teacher’s didactic autonomy and the needs of their pupils.

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