# Abstracts

## An algebraic introduction to textual statistic

#### Mauro La Torre

This article presents the fundamental definitions of textual statistic, starting from the basic ideas of language, signal, frequency, lexicon and so on, and introducing the basic concepts for automatic analysis of texts. Definitions are illustrated thanks to algebraic formulas in order to establish the fundamental concepts and assumptions of this field of study.

#### Keywords

Lexicon, language, textual statistic, lexical analysis, lexical analyzer, lexical grammar.

#### **Cultural Mediation in Museums as Narrative Form**

# Emma Nardi

Written messages for cultural mediation produced for the visitors in a museum are displayed in very different fashions. Differences concern both their shape (labels, room panels, summarizing panels) and the place where they are located, either close to the object in the museum site (peri-textual messages) or separated from it (epi-textual messages).

This article aims at showing that what all these messages have in common is in their narrative form: every message produced by the museum presents a "story" to the visitor which can be about several different aspects, from the physical description of the object to its origin, from the restorations it underwent to the iconographic analysis. If this hypothesis is acceptable, it is then possible to apply to

the texts for cultural mediation those categories that, since the first half of last century, have been pointed out by the scholars in narratology.

In this article, the functions which, according to Roland Barthes' model, allow the decomposition of a narrative text will be analyzed; as an example, such model will be applied to a text of cultural mediation in the epigraphic section of the Museo Nazionale Romano at the Terme di Diocleziano, thus discussing the results obtained through this analysis.

Finally, possible future applications will be proposed, relating to the methodology which can help better level the texts of cultural mediation in the museum to the needs of the visitors.

#### Keywords

Communication, museum, narratology, textual analysis, reading comprehension.

## Non-visitors: who are they, why is it important to know them?

### Irene Presta

Who are the non-visitors in a museum? Why is it important to know them? The answers to these questions inspired the following study, that has been conducted both on a theoretical and practical basis. The results of this research, despite the fact of not having a representative value, have an extremely important documental value. The data collection shows some almost surprising facts, such as the insufficient knowledge about what a museum is. More than half of the interviewed supplied a totally wrong definition for museum. The study of the non-visitor also represents an opportunity to rethink the organization of the museum itself. The first goal of this study is to investigate the main characteristics of non-visitors and the reasons why they don't visit museums, thus preventing museums from exploiting the educational function that is part of their mission. The educational role of museums is fundamental to fight illiteracy. In a theoretical context, where museums play such an important role in society, the study of non-visitors represents the first important step in order to understand the endogenous limits that prevent its educational function.

#### Keywords

Non-visitor, non visitors study, non visitor portrait, museum for non visitor, museum education.

# Evaluation of Validity and Validation by Means of the Argument-based Approach

Saskia Wools, Theo Eggen, Piet Sanders

Validity is the most important quality aspect of tests and assessments, but it is not clear how validity can be evaluated. This article presents a procedure for the evaluation of validity and validation which is an extension of the argument-based approach to validation. The evaluation consists of three criteria to evaluate the interpretive argument, the validity evidence provided, and the validity argument. This procedure is illustrated with an existing assessment: the driver performance assessment. The article concludes with recommendations for the application of the procedure.

### Keywords

Competence assessment, validity, validation, argument-based approach, evaluation.

## **Expressive Reading Aloud on IEA-PIRLS 2006**

# Gabriella Agrusti

This in-depth research study was aimed at investigating the effects of readaloud modification on students' performance on PIRLS 2006 reading comprehension tests, in two different forms: expressive reading and neutral reading. In Italy international comparative surveys often represent the main reference measure for student achievements in basic skills, but few experimental designs descending from secondary analyses attempt to investigate possible relationships among variables in order to translate results in suggestions for teaching practices. The present study was intended as a first step in this direction, analyzing if specific aspects of reading aloud can influence students' achievements in comprehension. Differences in means between groups were found statistically significant between expressive reading aloud administration and silent standard administration, though the strong concurrent validity of PIRLS 2006 test items allowed only a small variance in results due to experimental modification. Neutral reading aloud alone did not have significantly different effects on test results, confirming the general assumption that at this age word recognition skill is at an advanced level. More evident results were shown in items focused on the processes of interpreting and integrating ideas and information, highlighting how inferential more than retrieval processes are influenced by reading aloud, that efficiently convey the gist of the story and some of the implications in meaning of complex semantic topics, such as the identification and description of main characters' feelings.

#### Kevwords

PIRLS 2006, reading comprehension, expressive reading aloud, neutral reading aloud, assessment.

# From Lexmeter to Adapter. Towards a Match up between the Virtual and the Real Reader

#### Francesco Agrusti

This paper aims at illustrating a research about the development of software prototypes for automated production of cloze tests (LexMeter) and for the automated modulation of course texts that could match up the real reader verbal competences (Adapter). The verbal competences are defined starting directly from texts' lexicon and language. We assumed that the virtual reader knows and fully comprehends the meaning of the words included in texts. In this contribution it is discussed what is "behind" the planning of this software, illustrating both its technological and linguistic features. After the definition of the language model, based on lexical and descriptive-statistical aspects, it is described how the automated estimator and the text adapter were designed.

#### Keywords

Adaptive learning, cloze test, distance education, assessment, reading comprehension, verbal competences.