DigiStylus: a socio-technical approach to teaching and research in paleography

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Structure of the presentation:
- Former experiences in paleography teaching
- Students’ problems, Semantic Web and new teaching paradigms
- The DigiStylus information system
- Conclusion and perspectives for Informing Science
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The web site Women and written culture in the Middle Ages

http://edu.let.unicas.it/womediev
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The Open Catalogue of Malatestiana Manuscripts

http://www.malatestiana.it/manoscritti/
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The Web site BMB online (Bibliography of Beneventan Manuscripts)

http://edu.let.unicas.it/bmb/
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Results

- The information systems contributed in the creation of constructivist learning environments and helped students to develop cognitive apprenticeship strategies,
- The features of communities of learners (CoLs) and fostered communities of learners (FCL) were detected in the classes involved in the use of the described systems,
- New skills emerged in the students while working on the information systems described above: a) talent in working in a group, b) easier facing of complex tasks (thanks to the help each student could have from colleagues) and c) raising of the individual’s peculiarities within the community,
- New transversal competences were detected: a) better computing skills with respect to those of students attending traditional computing literacy courses, b) development of meta-cognitive strategies.
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Together with the described sites, devoted both to research and teaching, a static web site was made only to support teaching and to help students in learning paleography topics: **Teaching Materials for Latin Paleography.**
The site of Teaching materials for paleography started in 2001 and is made of three sections:

- **plates**, reproducing folios of ancient manuscripts; together with the images, the transcriptions are reported (i.e., digital full texts where symbols, special signs and abbreviations are clearly written);

- **texts**, containing full or partial documents reproducing papers, presentations and articles in conferences, catalogues and books, on different discipline topics like book archaeology, scripts, cataloguing, history of paleography etc.

- **work in progress**, hosting special documents; usually they are simple archives created with office automation programs (like MS Excel or MS Access), which are managed by the professor and the students (work in progress to be operated collaboratively, to be downloaded from the site etc.).
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The following differences in students behaviors have been detected:

a) **at the beginning** when the site was just made (i.e., when only a few documents were available), the students read all the texts and autonomously transcribed almost all the plates (then compared the texts they produced with the professor’s solutions),

b) **now**, when more than 86 documents and 281 plates (with their transcriptions) are available in the site, the students mostly limit to the texts the professor suggests in his lectures and limit themselves to the analysis of the plates they discuss in the class.

The difficulties students show in autonomously accessing the site pages can be considered one aspect of the more general problem of searching materials in the web? can the semantic web help students search the information they need and build new and meaningful knowledge?
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**CONTENT**
Content creation and organization on a scientific basis (discipline)
e-learning counterpart
creation of LO and use of the Semantic Web

**PROCESS**
Planning and management of teaching
e-learning counterpart
creation of UOL and use of the Semantic Web

**STUDENT**
Use of students’ features in teaching and in the monitoring of teaching-learning processes for the planning of feed-back actions
(less or no e-learning counterpart)

Successful teaching-learning process
Good students’ performances
(meaningful learning, good skills and competences)
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The implementation of practices by means of ICT as a new pedagogical paradigm

Knowledge construction is the result of the influence of the three different components.
The planning and carrying out of an information system for the management of information and its retrieval.
The use of information systems for implementing the practices adopted by professionals and inducing or creating communities.

The information system

DigiStylus

- Images reproducing plates in ancient manuscripts
- Documents on scientific topics in Latin Palaeography
- Database of the materials in the site
- Materials to be used for collaborative work or research in progress
- Download materials
- Queries
- Answers
- General users (society)
- Management Information System

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Conclusion and perspectives for Informing Science

We are in a situation very similar to that of the comparison of Semantic Web and socio-technologies, described above; the lack of suitable feedbacks for students and teachers led to choose the use of information systems, under the constraints of a model for knowledge construction, to let students overcome the problems they had in searching and finding information.

The question is then how informing science can maintain its features when its main aim is to help people build meaningful knowledge and wisdom. Accepted the principle that knowledge acquisition needs the use of digital technologies for building other information with respect to the one to be provided, the informing science will very difficultly limit its analyses to the instruments and the processes concerned with the information management, it will necessarily extend its field of interest to knowledge construction phenomena and to the features and methods of human sciences.