



# ScribaLAB 2.0: an environment for digital writing

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ScribaLAB is an interactive online platform with free registration at <http://lnx.forcoop.net/scribalab>.

The project originated in FunTeaching, an interactive web portal, as described in a previous article published in "Journal of e-Learning and Knowledge Society" edited by Giunti: (...) *As a matter of fact, some of the add-ons and individual or collaborative tools, originally designed to support virtual classes in Funteaching, have become so autonomous to demand a new system design inside the portal which has now got an online writing lab both in an English and Italian version: ScribaLAB. It would require a separate paper in all its autonomy.* (Pirruccello & Tramontana, 2007).

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## 1 Introduction

At the very beginning, ScribaLAB was set up with some add-ons for the writing tools already implemented in Funteaching virtual classes which had been used for ICT teacher training courses since the year 2000.

The use of ScribaLAB is addressed directly to students and the teachers' interferences consists mainly in inviting students to apply and experience media writing.

Working in a learning environment respectful of cognitive processes does not involve an automatic improvement of writing practice, it is only the "Writing Space" which changes because it has a large number of graphical organizers that guide from the first draft through a step by step process up to the final editing. It is an innovative system to perceive and share writing processes for study skills support and creative writing.

In addition, a conception of technologies able to change our way of organizing and expressing our culture due to the pure fact that they exist, belongs to that technological and deterministic rhetoric which J.B. Bolter refuses in the introduction to his second edition of "Writing Space": «(...) *writing technologies are never external agents that invade and occupy the minds of their user. These technologies are natural or naturalized only in the culture dynamics. Writing techniques are influenced by society and culture and are influenced in their turn. (...) Electronic writing is always involved in material culture and in contemporary economics. Computers are tangible objects with aesthetic importance and social significance, and digital devices and software are objects of important economic exchange.*» (Bolter, 2002, pp. 17-18)

ScribaLAB was created with a precise objective: setting up an online laboratory, that is, a writing lab for the amanuensis of the new millennium. It offers interactive writing tools to improve one of the most important skill: writing. This explains the choice of the name for the system ScribaLAB: "Scriba" refers to the medieval scribe and "Lab" is short for laboratory.

ScribaLAB, an online writing laboratory, is efficacious and flexible in the classroom: with an interactive whiteboard connected to the Internet, with a laptop and an overhead projector or with a home connection any time and anywhere being respectful of individual learning times and productivity.

ScribaLAB offers a series of teaching techniques opposite to teacher-centred teaching: it is a learning environment in which students are involved in testing and analysing audiovisual material and writing tools to remediate and share knowledge. Teacher training seminars on ScribaLAB usage, included in PON Projects (Piano Operativo Nazionale), have produced encouraging data on the possibility of fostering satisfying and significant learning. The teacher's task consists in a careful concentration on teaching contents. The teacher is not

asked to be a simple instructor because ScribaTools perform instructive activities step by step up to the final editing and all the students assignments are exported in PDF format to a great advantage of students and teachers.

## 2 ScribaLAB 2.0 vs ToolsWeb 2.0

We often see the tendency to decline Social Network environments for teaching purposes, from the famous Facebook to the three-dimensional Second Life. These Web 2.0 environments were not created to improve learning and teaching processes and a different use does not appear to provoke such an enthusiasm towards worthwhile teaching applications.

On the contrary, ScribaLAB was designed and implemented by keeping in mind the teaching and learning dynamic process and its modular tools greatly differ from overloading offer of web tools on the Internet. ScribaLAB is a learning environment whose rationale is a precise design to facilitate and enhance a teaching-learning process that can't rely on serendipity or informality.

Let us examine, for example, Scriba5W, a tool which guides the process of writing a newspaper article. Journalistic activities can be done with a word editor, by networking or by posting in a forum.

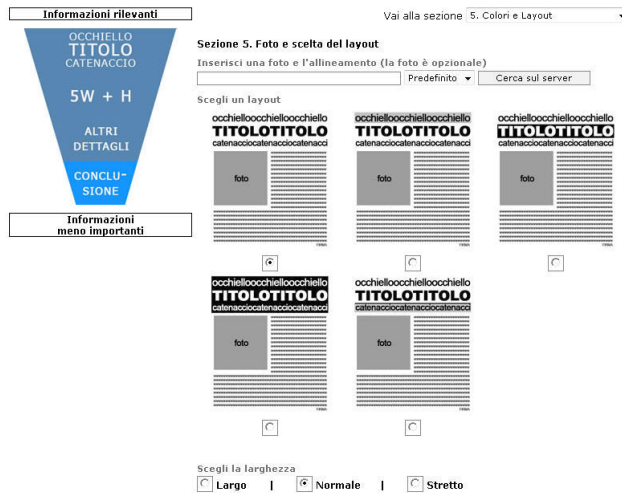


Fig. 1 - Final Editing Section in Scriba5W

What makes the difference in Scriba5w is that you can have access to a guided step by step procedure which is interactive. The learning process is facilitated in a twofold direction: user's autonomy is fostered as the tool is mainly a graphic organizer and the teaching process is facilitated by the inverted pyra-

mid technique directly applied to the writing process of the single article with computerised digits and no teacher mediation or supervision.

Every time Web 2.0 is dealt with, the emphasis is on social learning, knowledge sharing and user generated contents. Is Web 2.0 really a “revolutionary road”? Is it really innovative and effective? What

concrete trends and opportunities can we identify? Paul Anderson in his “The Big Ideas Behind Web 2.0” presents acceptable even if controversial scenarios with an invitation to think deeply about how the relationship between ideas and technology changes, how openness and sharing relate to participants’ personal and educational needs and to the power of their mind tools to avoid cognitive overloading, scatter and inconsistency.

ScribaLAB 2.0 design aims at overcoming some of Web 2.0 critical issues. The first issue concerns the relationship between Being integrated / Being specific: on one hand there is a strong tendency to make different tools move together in a single device (a platform or iphones and ipads), on the other hand you realize that you need specific tools to reach well stated objectives. ScribaLAB gives a concrete answer to this contradiction by devising specific modular tools which assist the users in their cognitive process in digital writing.

The second issue concerns the re-mediation process which allows the introduction of novelty while maintaining continuity, as Jay David Bolter observes, it is a modifying and absorbing process: books, newspapers, cinema and television enter the web changing their format and trying to maintain their role. In the process of getting new positions into the web, the media tend to simplify their language and style to get transparency in communication, as it is required for usability sake, not to run the risk of producing overload and mixture of different languages (Bolter, 2002).

In ScribaLAB, media format and languages are well defined because they are created by users according to predefined writing standards and the artefacts are tracked back for all the ScribaLAB users through a search engine, inside the system. This does not mean that ScribaLAB is armor-plated but exactly the opposite. As for example, the production of podcasting episodes through ScribaPodcast can be spread via RSS, if the user or users want to.

Educational technologies involve a balance between personalization needs and standardization. RSS formats allow us to aggregate information in our web pages and, paradoxically, this is itself a source of content overload. ScribaLAB System as far as it is concerned, ensures the maximum of personalization while respecting, for example, standards such as RSS and SCORMS.

What balance will be found between a libertarian vision of the web, a territory in which everybody expresses himself without any mediation and the need to ensure reliability and a meaning distinct from ‘noise’? The background noise of the web can sometimes prevail on what is significant up to the point

of scattering valid information. The ScribaLAB System, compatibly with its educational aims connected to digital and media writing, has its tools to mediate and re-mediate writing while the need for free circulation of ideas and audiovisual products rely on users' blogs, photo gallery with multimedia contents and social networking with instant messaging inside the System.

Networking in ScribaLAB is an attempt to overcome the contradiction between socializing and self, a feature of the active but not interactive web, a contradiction with a prospective world full of writers without readers.

Scribalab is designed to have material written and read, at least in the community of its registered users.

The Web 2.0 approach, adopted in ScribaLAB design, involves the same empowerment of teachers and students with educational and organizational flexibility to interact with individual and collaborative tools. You can decide from time to time about formal or informal educational tracks. User profile is unique for all the participants having the same empowerment inside the system and sharing the same privileges. Even if some specialized tools to create digital educational contents exist and are addressed mainly to teachers individually or in group, such as ScribaBuilder[LO] or Scriba[SCORM], they can be used by all registered users, so also the students can use them.

There are individual tools, such as ScribaLetter, Scriba5W or ScribaMapping, in which users can work according to their learning rhythm, save what they have produced, continue the previous work to complete or revise it and share the final version if they want to. On the contrary, collaborative tools such as Scriba6Hats or ScribaNeverending, can be activated only if there is an interaction among interested users.

The screenshot shows the ScribaLAB 2.0 web interface. At the top, there is a blue header with the ScribaLAB logo and the user name 'Silvana Pirruccello [silvana] (Logout)'. Below the header is a navigation menu with options: ScribaLAB, Community, Tools, Menu Personale, Amministrazione, and Help. The main content area shows a forum post in the 'Scriba6Hats' section. The post title is 'Sul muro esterno della scuola viene trovata una scritta...bisogna prendere i provvedimenti del caso.' The author is 'admin', an Administrator, with a registration date of 01/01/2008 and 17 posts. The post content discusses a white hat found on a school wall and mentions a blue hat. There is a small image of a white hat. The interface also shows a user profile for 'silvana' and a 'Cappello' section with a blue hat image.

Fig. 2 - Scriba6Hats

This choice in designing the system reverses the paradigm of teacher-centred or content-centred learning systems, as it is mainly student-centred: the focus is on the user who needs to learn individually or in groups.

ScribaLAB has been undergoing an iterative redesign over the last five years. Its aims at activating cognitive processes to enhance its main objective: teaching and learning in an online laboratory involving one of the most interesting cross-section skills, digital and media writing.

For instance, the 3P model (People, Process, Product) marked the very first years of ScribaLAB's life: the main target was to gather people in the same environment to experiment standard procedures and obtain writing artefacts. The first tools of individual productivity, such as ScribaLetter or Scriba5W, were created to facilitate, for example, the writing of an article. That article could be published and reviewed by the users. Community exchange started only after the publication of the artefacts and not during the creation. Gradually, the attention shifted on collaborative tools which would allow collaboration and sharing in real time. This is the case of ScribaBuilder, which can be used individually or collaboratively.

### 3 Some experimental data

Most of our experimental data are the result of procedural observations in ICT teacher training courses focused on the creation of digital educational resources and the use of interactive whiteboards.

Teachers usually show a great interest in improving their teaching methods and to engage their students in motivating activities both in traditional class and in online activities.

They oppose resistance to pedagogical theories and discussions with no immediate application or to very advanced technological issues aiming at overcoming the social and collaborative instance of classroom learning activities.

Teachers want mainly to be productive and manage audio video tools together with their students for multimedia production. The teachers involved in ICT teacher training courses belong to comprehensive and secondary State schools<sup>1</sup>.

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<sup>1</sup> This last two years' experimentation has been addressed at groups of teachers from different state schools in Sicily, in the province of:

- Siracusa: PON Project - corso "Approfondiamo le ICT" at Liceo Scientifico "E. Vittorini" di Lentini (SR) - 25 users working on ScribaLAB in October 2008;
- Catania: PON Project - corso congiunto di "L'informatica al servizio della didattica" e "Un Nuovo modo di insegnare le lingue" at Liceo Scientifico Statale "E. Majorana" - Scordia (CT) - 42 teachers working on ScribaLAB in April and May 2009;
- Ragusa: PON Project ob. D1 - corso "Insegnare con la lavagna interattiva multimediale" at Liceo Scientifico Statale "E. Fermi" di Ragusa - 30 teachers working on ScribaLAB in February 2010;
- Caltanissetta: Progetto PON ob. B1 - corso "Formazione docenti sulle metodologie scientifico matematiche e in lingua madre"

In this scenario ScribaLAB has been used to support online activities in blended learning modality and bypass the use of the interactive whiteboard software to create teaching contents.

### 3.1 Objectives

The experimentation has traced some of the dynamics in the use of individual and collaborative tools in ScribaLAB along with Learning Object creation through the use of ScribaBuilder and Scriba[SCORM], mainly designed for teachers. Four stages have been suggested with a meta-cognitive analysis to include ScribaTools in everyday teaching practice.

The four stages are the following:

1. ScribaLAB familiarization;
2. use of individual ScribaTools
3. use of collaborative ScribaTools
4. production of multimedia artefacts through the use of specific tools such as ScribaPodcast or ScribaStageplay.

### 3.2 Methodology and tools

The teacher trainer courses under observation have been delivered in blended learning modality by integrating face-to face lessons with assignments on the e-learning Platform Moodle “E-SpeRiDi”.

Each course has introduced the main theories of multimedia learning and digital writing using different media in face-to-face lessons, brainstorming activities, creative sessions and detailed analysis of artefacts.

Individual and collaborative lab activities have been supported by tech tools, such as Interactive Whiteboards with Internet connection to ScribaLAB.

The participants have also been divided in small groups to design digital contents and learning objects.

Scaffolding for online activities has included tutorials and step by step interactive guides or PDF formats in Moodle – “E-SpeRiDi”. Discussion forums have been created for a quality sort analysis of Scribatools applied to traditional teaching procedures.

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at Scuola Media Statale “Rosso di San Secondo” in Caltanissetta. It is the most recent project. It started on September 7th and involves 60 teachers belonging to the same school. They teach humanities (Italian, history, geography, foreign languages etc.), science and mathematics. The school is also included in the national project cl@ssi 2.0 and has interactive whiteboards and pcs in each classroom.



*Does ScribaLAB allow you to innovate methods and techniques in school teaching –learning procedures?*

Describe how students' productivity changes when they use an individual ScribaLAB tool.

*Do ScribaLAB tools help as re-mediation aids, knowledge management and building through multimedia digital languages?*

You have worked in small groups with your colleagues at ScribaPodcast and ScribaStageplay. You have realized that writing intended to be listened to is different from writing to be read and that collaborative script writing implies a negotiated storyboard for the final video editing. How do you evaluate the Podcast episodes you have worked on? How do you evaluate the production process you followed to create and publish online didactic docu-films?

*Does ScribaLAB allow you to reorganise an environment in terms of learning spaces and times?*

How much work did you do comfortably sitting at home? How would you get the most from your students using Scribatools? Compare traditional teaching aids with an individual or collaborative tool of your choice in ScribaLAB.

*How much does ScribaLAB enhance the learning process?*

Give some examples on how the minimal teaching aid in ScribaLAB is a time saving device to let you concentrate on writing contents and create quality multimedia contents.

*Which tools enhance creative and divergent thinking in your students?*

You have experienced with your colleagues the mini-forum Scriba6Hats and ScribaNeverending. You have discussed about the introduction of digital textbooks or the advantage/disadvantage of having a single teacher at primary school as was the case in the past. You have appreciated the dynamics of the debate by wearing thinking hats. Now wear a white hat and suggest a topic of interest for your students to debate. What is the difference between this mini-forum and traditional ones?

You have also worked on the collaborative tool ScribaNeverending. How do you evaluate the psycho- linguistic reading and writing game on great literature tales with the verticalised story pattern and presentation?

How do you evaluate the other option to work collaboratively on stories in which the user-owner has the privilege to write the first and the last paragraph?

*How much do ScribaLAB tools facilitate cognitive process and personali-*



zation?

Experimental data in this respect refer to a quality and deep approach on a small group of users to point out critical issues and potentialities. Usability and ergonomic indicators are the key to optimise existing tools or design new ones.

Because of the complexity of the data to be obtained, some quality sort research devises have been activated, such as:

- focus group on single tools to discuss critical issues and potentialities;
- brainstorming and face-to face creative sessions;
- question and answer Forum in Moodle in which the participants have to post their contribution before having access to read the other participants' contribution.
- Quality Sort Survey

The participants agree on the value of ScribaLAB as a teaching aid to creative writing and digital writing skills development which can be easily integrated into classroom teaching procedures.

## Conclusions

ScribaLAB 2.0 is a homogeneous platform which can be preferred to the multitude of digital writing tools on the web as it is a coherent System with a modular and flexible structure.

It is a work in progress as new add-ons and new tools are implemented according to the advantages in communication effectiveness they can contribute while considering, at the same time, the disadvantages (such us lack of control on the different steps to final editing) that a super computerized writing process can provoke in users.

As for instance, Scriba6Shapes and Scribaschooltrip have not been implemented yet for opposite reasons: the first tool is too individual while the second is too participative.

Our feasibility analysis of Scriba6Shapes, designed on the basis of Edward De Bono's Six Frames for Thinking about Information, is a tool to learn how to select and evaluate information in order to use it efficaciously. However, the tool can't be used as a guide to search for information on the internet individually or as a group work. If it remains an individual tool, which output will be worth sharing in the ScribaLAB Community? What is the difference which makes the difference with a social bookmarking?

Our feasibility analysis of Scribaschooltrip has pointed out critical issues on who does what by using the tool in the different stages of the educational trip from the preparation and booking to post-production of educational materials.

Do we need to assign a supervision role to teachers which is not designed for the other existing collaborative tools?

ScribaLAB perspectives include the release of the System as an Open Educational Resource in English Version.

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## LINKS

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*Links to ScribaLAB videotutorials*

- Scriba5w: <http://lnx.forcoop.net/ScribaLAB/tutorial/Scriba5w>;
- Scriba6hats: <http://lnx.forcoop.net/ScribaLAB/tutorial/Scriba6hats>;
- ScribaLetter: <http://lnx.forcoop.net/ScribaLAB/tutorial/ScribaLetter>;
- ScribaMapping: <http://lnx.forcoop.net/ScribaLAB/tutorial/Scribampping>;
- ScribaPodcast: <http://lnx.forcoop.net/ScribaLAB/tutorial/ScribaPodcast>;
- ScribaTimeLiner: <http://lnx.forcoop.net/ScribaLAB/tutorial/Scribatmelnr>;
- ScribaVAKOG: <http://lnx.forcoop.net/ScribaLAB/tutorial/ScribaVAKOG>;

*Links to audio-video output in ScribaLAB*

La Cavalleria Rusticana - I luoghi e le citazioni

Corso PON “Approfondiamo le ICT” - Liceo Scientifico “E. Vittorini” – Lentini (SR)

[http://lnx.forcoop.net/scribalab/sc\\_multimedia.php?mod=sng&media=12](http://lnx.forcoop.net/scribalab/sc_multimedia.php?mod=sng&media=12)

Chi non avesse mai veduto foco - Omaggio a Jacopo da Lentini

Corso PON “Approfondiamo le ICT” - Liceo Scientifico “E. Vittorini” – Lentini (SR)

[http://lnx.forcoop.net/scribalab/sc\\_multimedia.php?mod=sng&media=9](http://lnx.forcoop.net/scribalab/sc_multimedia.php?mod=sng&media=9)

Mastro Don Gesualdo - Luoghi e citazioni

Liceo Scientifico “E. Majorana” – SCORDIA (CT) - Corso PON “L’informatica al servizio della didattica”

[http://lnx.forcoop.net/scribalab/sc\\_multimedia.php?mod=sng&media=13](http://lnx.forcoop.net/scribalab/sc_multimedia.php?mod=sng&media=13)

Quattro sbrizzi - Omaggio a Salvo Basso

Liceo Scientifico Statale “E. Majorana” – SCORDIA (CT) - Corso PON “L’informatica al servizio della didattica”

[http://lnx.forcoop.net/scribalab/sc\\_multimedia.php?mod=sng&media=8](http://lnx.forcoop.net/scribalab/sc_multimedia.php?mod=sng&media=8)

I luoghi televisivi del commissario Montalbano

Liceo Scientifico “E. Fermi” – Ragusa - Corso PON “Insegnare con la LIM”

[http://lnx.forcoop.net/scribalab/sc\\_multimedia.php?mod=sng&media=11](http://lnx.forcoop.net/scribalab/sc_multimedia.php?mod=sng&media=11)