Visual-literacy.org

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VISUAL-LITERACY.ORG
A BLENDED E-LEARNING PROGRAM FOR VISUALIZATION IN COMMUNICATION, BUSINESS, AND ENGINEERING

1. Background

As a project funded by the national Swiss Virtual Campus (SVC) e-learning initiative, visual-literacy.org (or viz.ch) is an orchestrated attempt to educate Swiss university students about the merits and risks of visual communication. In this project, the University of Lugano (USI) together with its partners has developed a blended learning program to foster the visual literacy of communication, business, and engineering students in Switzerland through peer- and resource-based learning approaches. In this text we briefly outline the background, scope and impact of this e-learning initiative.

Visual literacy in this context can be defined as the personal ability to adequately evaluate, apply, or create (conceptual) visual representations. After completion of the visual-literacy tutorial, students should be able to competently evaluate advantages and disadvantages of visual representations in their respective application settings, improve their shortcomings, create and communicate knowledge graphically using existing visual methods, or devise new ways of representing insights through images.

The leading house of the project is the University of Lugano Faculty of Communication (ICA/Institute for Corporate Communication), partnering with the university's eLab and informatics faculty. Further partners of the project are the =*mcm Institute* at the University of St. Gallen, the HEC Management Studies section of the University of Geneva, and the University of Applied Sciences North Western Switzerland.

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2. Structure, Contents, and Pedagogic Approach

The Visual Literacy e-learning program is divided into four overall sections:

1. General *learning resources* such as interactive knowledge maps (see for example: http://www.visual-literacy.org/pages/documents.htm), visualization software (such as lets-focus), a glossary, and the visualization hall of fame (VizHall), an interactive graphic application, where students can share and rate their own visual solutions or those provided by the course instructors.
2. *Basic modules* that focus on the rationale of using visualization in communication, business, and engineering, and contain elementary concepts regarding perception, design, and information visualization.
3. *Application modules* that highlight and discuss specific application contexts of visualization, such as visualization in strategic management, visualization for information exploration, or visualization in knowledge management.
4. *Exploration modules* invite and instruct students to develop their own solutions, based on their previous class experiences and collectively evaluate their solutions according to different quality criteria.

These four sections are further subdivided into ten *individual learning modules*. Each module can be used as a self-sufficient learning content for specific visualization topics, such as visualizing hierarchies, using visualization to facilitate team communication, visualizing software code, or visualizing corporate strategies. However, many of the modules can also be completed in sequence. Alternatively, there are so-called Vizits or visiting points, where students from one module can visit accessible and attractive course contents from other modules. All contents and applications are offered in English.

A key feature of the visual-literacy.org e-learning program is its *peer-based learning approach* where students learn from each others' results and feedback. To facilitate this lateral learning process, we have developed a collaborative sharing and rating application called VizHall that lets students share their own visual solutions with their peers and learn from their ratings and comments. Our first experiences show that undergraduate and graduate students alike take their role as peer reviewers very seriously

and provide insightful comments and suggestions to their colleagues. In this way, they contribute not only to their own visual literacy, but also to that of their fellow students.

3. Results and Resonance

So far the e-learning modules and applications have been used in the executive MBA at the University of St. Gallen, at the executive MBA of the University of Geneva, in two bachelor courses and two master programs of the University of Lugano and in various executive seminars. In addition, it has been tested in classes at the ETH Zurich, the University of Cambridge (UK), the University of Krems (Austria), and at the Central University of Finance and Economics (CUFE) in Beijing, China. The resulting experiences show that peer-learning is indeed a fruitful e-learning approach, which – however – needs to be phased and timed with particular attention and diligence.

The program has attracted considerable attention from the international community (especially regarding its interactive knowledge maps). Hundreds of bloggers have written about it and it has been featured in US magazines such as Business Week or O'Reilly's Release 2.0, and in several daily and weekly newspapers. For the keyword visualization it has been (for the last six months) the most tagged or bookmarked website on the Internet.

If you would like to use certain modules or resources of the visual-literacy.org program, contact the leading house at *epplerm@gmail.com* (project head).

Weblinks

http://www.visual-literacy.org	Homepage of the SVC project with demo modules and interactive knowledge maps
http://www.lets-focus.com	Homepage of the interactive visualization software lets-focus

	(developed by USI and reflact) for teaching and learning purposes in the visual realm
http://www.unisi.ch	University of Lugano (USI)
http://www.hec.unige.ch	University of Geneva HEC Management Studies
http://www.mcm.unisg.ch	University of St. Gallen Institute for Media and Communications Management
http://www.fhnw.ch	University of Applied Sciences North Western Switzerland