Teaching Websites as Communication: A "Coffee Shop Approach"

Davide Bolchini*, Daniel Arasa & Lorenzo Cantoni***

*TEC-Lab & webatelier.net, Faculty of Communication Sciences, University of Lugano, Switzerland
{bolchind, cantonil}@lu.unisi.ch}
**Faculty of Institutional Communication, Pontifical University of the Holy Cross, Rome, Italy
arasa@usc.urbe.it

Abstract: Effectively teaching Internet communication and website design to students without a technical background is not a trivial task. This paper introduces a framework for understanding the factors characterizing the communication scenario defined by a web site which has been used in undergraduate courses of the Communication curriculum. The approach assumes that the creation and management of websites involve both technical and non-technical aspects since a website is a complex and a multidimensional reality. Indeed, a website is: 1) a cluster of contents and services (functions, possible operations, etc.); 2) a collection of technical instruments (software and hardware) that make accessible those contents and operations (or activities); 3) a group of people who run the website and 4) a group of people who visit it; moreover, all the above aspects are to be understood in a given (communication market) context. Only if all of these dimensions are taken into consideration, will it be possible to communicate successfully through the Internet.

1. Introduction and Motivation

It is becoming increasingly evident today that technical skills are necessary but not sufficient in order to achieve quality Internet communication. This is especially true for the areas of website production as well as that of web services management. Achieving quality Internet communication demands a keen understanding of the electronic medium and a proficiency in communication skills. At the same time, it is essential to know how to analyze — in its planning or in its evaluation phase — the chosen communication strategy, to see if it fits one's overall communication goals.

This paper presents what their authors call the "Coffee Shop Approach (CSA)," that is, a comprehensive framework for analyzing website communication, extensively used in higher-education curricula within the faculty of Communication Sciences of the University of Lugano (Switzerland) and the faculty of Institutional Communication of the Pontifical University of the Holy Cross in Rome (Italy). We want to go further in the same direction indicated by Geest (Geest 2001): "Organisations are becoming aware that they have to give their visitors good reasons to visit their site and good reasons to return to it. The medium alone no longer is enough of a message. Increasingly, organizations find that the creation of web sites is not merely a hobby of their Information Systems people, but an essential part of their internal and external communication. Thus the website and the communication policy it embodies becomes the responsibility of managers and communication people, as well as the creation and maintenance of the organisation's flyers, catalogues, commercials, annual reports or helpdesk service. Those people will approach planning and producing a web site as a communication design process, rather than a technical design process". Borrowing and adapting the title of one of the most influential books in the field of language teaching theory, by George Widdowson: "Teaching Languages as Communication" (Widdowson 1978), we now cope with the challenge of "Teaching Websites as Communication".

Our framework compares the components of a website to the components of a coffee shop, or any other service oriented business for that matter. In a coffee shop we can identify four basic elements:

1. food and beverages;
2. means for serving the food and beverages;
3. owners and employees; and,
4. clients.

Similarly, in a website we can find:

- contents and services (1);
- functionalities that allow us to use those contents and services (2);
- the website managers (3),
- and, most importantly, the people: the visitors (4).

None of these elements, whether human or physical, can be left aside in analyzing a website; moreover, all these elements are to be considered in themselves, in their reciprocal interactions, as well as in their interactions with their relevant markets (competitor coffee shops / competitor websites).

Our goal is to underscore that only by analyzing these elements together can a website study be considered "comprehensive."

2. Needed Competences to Communicate Through the Internet

Internet communication was initially considered an activity exclusively for computer or graphic designer people. Today, it is accepted that, besides technical skills, it also requires specific communication skills and mastery of the communication sciences. This does not mean, of course, that graphic and technical skills are no longer essential for Internet communication. They are indispensable and irreplaceable. However, their contribution to communication as a whole is only partial. In the same way, if someone wanted to publish a newspaper, s/he would need typing skills and know-how in layout design, but these skills would not be enough. Besides typists and designers, journalists and editors would be also needed.

The competences required for Internet communication may be clustered in four main activities: analyzing or evaluating, projecting, producing, and running or managing.

1. *Analyzing* or *evaluating* is the task of a communications expert. This person should know if a communication initiative is adequate or not. For example, s/he has to be able to res pond to the question "What is the best way to reach an intended target: a message through a mailing list or an open text in the home page of the website?"

2. *Projecting* is the capability to describe in an adequate and precise way a hypertext object, so that its behavior can be foreseen. Just as a house needs an architect to design it and an engineer to build it, so too does a website require a designer and a builder.

3. *Producing* implicates experts in communication technologies and visual communications as well as in all the other semiotic codes involved. For example, if the communication object were a musical CD-ROM, a technical audio expert would be needed. Just as in the case of a house, in which the production phase would require a geometer, a master builder or masons, in a website production technical personnel would also be needed.

4. *Running* or *managing*. Internet communication is to be considered as something dynamic that requires constant updating just as a house needs constant maintenance.

3. Website Elements

The WWW's hypertextual nature is organized through particular "places" called websites. In a casual conversation, it is not difficult to reach an agreement about what a website is. Nevertheless, it is very difficult to give a scientific and univocal definition. The following paragraphs are not an attempt to provide a definitive definition, but they try to present a map of the different dimensions involved in website communication.

With this objective, let us help ourselves with the coffee shop example that gives rise to the name of our proposed framework. What is a coffee shop? A coffee shop is an ensemble of:
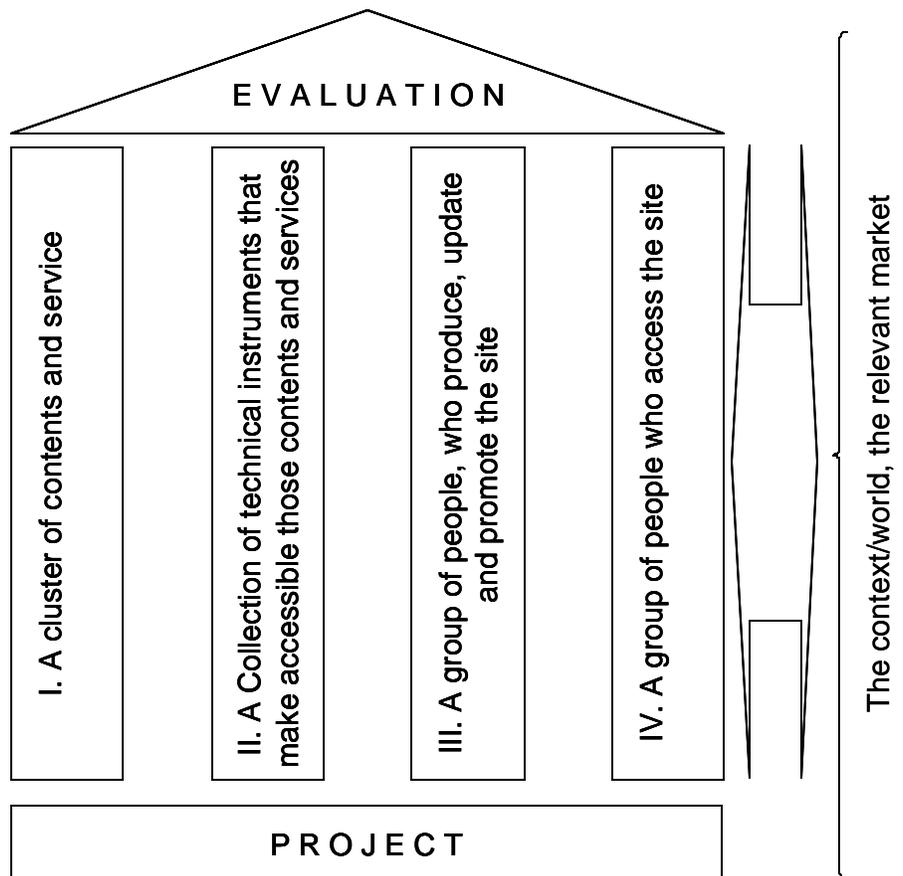
1) eatable or usable objects such as food, beverages or games;

2) plates, glasses, covers, tables and chairs, the kitchen and its tools, the premises, a game table, a TV set, etc. All these objects allow the previously listed objects to be made or enjoyed.

However, the coffee shop is not real, "alive," without:

3) a community of people who manages it, cooks the food, serves the tables, etc.; and

4) a community of people who frequent it to eat, drink, play, stay with friends, etc.

These four dimensions, two of them related to things and two related to people, are also present in website communication.

One more aspect is to be taken into consideration to complete the framework. Let us come back for a moment to our coffee shop: every element can not be considered only in itself and by itself, but gets its meaning and its value only in a given context, in its "semiosphere". Every sign has to be defined not only for what it is, but also for what it is not, getting a specific value only in a given ecological context; the fact that a coffee shop is the first one selling Italian food (or in the city center, the most visited, the only one with living music shows, …) does depend both on its nature and on the world it belongs to, where other competitors are working as well.

For example, on the Internet, the string "XXX" usually denotes an immoral, pornographic content, and it used to mean just (or mainly) that; after the success of the movie "XXX", this same string is losing its single meaning,

having to compete with another one. As it happens for stock quotes, the exact value of each single item is due also to a complex market negotiation.

Let us examine each one of the above four dimensions, taking into account also their interaction with the fifth one.

E V A L U A T I O N

I. A cluster of contents and service

II. A Collection of technical instruments that make accessible those contents and services

III. A group of people, who produce, update and promote the site

IV. A group of people who access the site

The context/world, the relevant market

P R O J E C T

Figure 1. The coffee-shop model. Pillars I and II are things, while pillars III and IV are persons. Project and evaluation activities are cross-pillar, while the relevant context/market affects all the elements

3.1. A Cluster of Contents and Services

First, a website is a cluster of contents such as messages, possible interactions or transactions (reading, chatting, voting, playing, gambling, ordering, shopping, selling, etc.). Therefore, websites' quality is, first of all, very related to the question of quality content.

Library Science was one of the first disciplines to face the problem of information quality content through the Internet. Librarians deal constantly with information overload and, as a result, they need to make a constant selection of titles that are most relevant to their public. The librarian's model of content analysis, usually applied to print sources, can be adapted to the world of Internet communication. The librarian's model inquires into five different attributes: Accuracy, Authority, Objectivity, Currency, and Coverage (Alexander 1999).

Besides content, there are services to be considered. In Internet it is particularly important to offer only those services—ordering, customizing, buying, gambling, voting, dialoguing, or others—that are really suitable to the communication goals and to the real needs of the user. Offering services without ensuring a regular and professional management can frustrate the visitors' expectations and pinpoint the weak points of our communication strategy.

3.2 A Collection of Technical Instruments that Make Accessible Those Contents and Services

The creation of a website is also the production of a piece of software. For that reason, we can say that a website is also the collection of technical instruments that make accessible and possible the contents and services within it. This collection also includes the hardware and connections necessary to access the site through the Net and all the elements depending on the programming such as graphical dimension, layout, or navigational paths.

The concept of website usability may be applied to different aspects of a website but it usually refers directly to its technical dimension. Moreover, usability puts in relation the technical aspect with the users' dimension.

The topic of usability is very much alive and can take different approaches (Nielsen 2000). There are two main usability approaches: deductive and inductive. The deductive approach is based on general principles from different disciplines such as cognitive science, psychology, semiotics, and ethics. This method employs an inspector or expert to verify how those principles are applied in the website. The inductive approach, on the other hand, employs a group of users who represent the target. The users visit the site and are later questioned to verify their satisfaction or their frustration. Both operative modalities offer useful results to evaluate and improve electronic communication.

At the same time, any usability inquiry, whether inductive or deductive, should always take into consideration the communication goals and the different stakeholders. A complete usability test will not work solely with generic universal usability principles, but it will need concrete user scenarios, i.e., principles applied to specific contexts of use. For example, the general usability principle that "any page of a website should be reached in a maximum of three clicks of the mouse," can be applied in many contexts, such as in the case of a news page or a services' portal. Nonetheless, the three-clicks principle would not be adequate in a website for playing games (or creating the sensation of suspense). In an online treasury search, for instance, the opposite principle would probably be more applicable: "It must be impossible (or very difficult) to reach the page of the treasure in three clicks."

All of this reflects that usability implies a complex relationship between the contents/services (pillar I) and the instruments (pillar II), and between them and the users (pillar IV), the goals of the senders (pillar III), and the context of use.

3.3 A Group of People, Who Produce, Update and Promote the Site

A website—like a coffee shop—is still a fiction if no one starts and runs it. A new element, then, has to be considered to have a comprehensive image of a website as communication: the people. A website is also the group of people who project, create, keep, update, manage and promote it, and, of course, interact with its visitors.

Interactivity is one of the distinctive characteristics of online communication. To reach effective Internet communication, the user needs to be able to recognize real people beyond the object of use (website), people with the intention of communicating a certain message (Holtz 1998).

An adequate organization of the people involved in the website's management is essential to achieve an effective and efficient communication. The organizational dimension has to be taken into account always when conceiving communication over the Net. The work-force organization will require adequate resources, which are expensive in terms of training and financing. People involved in the website's production and management will have to take control over all kinds of activities: replying electronic mail, writing new contents, doing online promotion, registering the site with the search engines, controlling the mailing list and analyzing the logfile.

A constant analysis and research of the relevant communication market is also an important part of the management's site activities: What are the competitors or similar organizations doing (benchmarking)? How is our website positioned on the Net (in the search engines, or in link popularity)? What is our organization's image in the Internet? Is it the center of attention in other sites, newsgroups, etc.? Is it attacked or libeled? (Introvigne 2000).

3.4 A Group of People Who Access the Site

A website is also people who access it and enjoy its contents. For that reason, the overall communication strategy and the specific communication goals need to be determined according to the addressees (target). In this regard, recent pragmalinguistical research has underlined the importance of "relevance" in communications (Sperber 1995). The relevance factor implies that real communication only happens when someone is interested and affected by a message. The Internet's information overload (Lepori 2002) has attracted strongly the attention on the relevance aspect. In fact, the users' enthusiasm during the first years of the Internet produced much aimless navigation and few effective communications. Today, users are searching more and more for the relevant information they are interested in (Lepori 2002).

Unfortunately, many responsible for Internet communications make an inequitable equation between the concepts of technically accessible "by anyone" and "for anyone." At the bottom, this confusion becomes an alibi that prevents effective communication. For example, a website written in Italian would hardly be adequate for a German speaker, or a site created for teenagers would scarcely attract adults. It does not mean, of course, that a site for old people cannot be used or enjoyed by a youngster. The same occurs in the real world. Nothing hinders a child to use his/her parents' shoes, but it does not imply that Shoes & Co. should produce a model of shoes "for everyone, child or adult." In the virtual world, then, it is certainly possible to design a website thinking of different publics, but each one of them has to be very well identified, just as a newspaper may include different sections—financial, sport, literature or cinema—for different publics.

Moreover, Internet communication offers new and rich opportunities to verify, at any time, the effective use of messages. These opportunities are based on the fact that any event in the electronic world leaves a permanent trace. This trace can be studied through an analysis of the logfile (Stout 1997). User sessions of a website or service over the Net can be analyzed to know and understand better the visitors, their interests, and their demands. A coffee shop, for example, would be arranged and organized according to its vis itors' tastes, which would be very different if they were adolescents or retirees. Similarly, a website should be designed according to its specific public. Themes related to the understanding of website visitors are logfile analysis and website promotion.

4. Initial Evaluation of the framework

CSA provides a framework of understanding that comes from the reflection on the experience with real web projects and has been empirically validated with real web projects. In fact, the framework has been intensively used by novice and experienced designers of the webatelier.net, a client-oriented web laboratory for Communication Science students within the University of Lugano. Here, from ten to twelve web applications a year are developed and deployed by students for private and public client in Switzerland and in Italy. Designers are multidisciplinary groups of students (from communication science, communication technology and graphic design) coordinated by design experts. Students are trained about CSA, and have then the opportunity to employ its effectiveness for the requirements analysis with the main stakeholders, as well as during the design, the promotion and the evaluation of the site.

In these experiences, CSA was used effectively by junior designers to define a clear picture of the goals of all the relevant stakeholders involved in the web projects and to master the project evolution while taking into account the issues raised by the communication established by the presence of a website.

The main advantage of the framework is that it is simple and comprehensive at the same time, giving a high-level view of the factors driving online communication design. Moreover, both analysts and designers with little technical competence had no difficulty in understanding it and organizing the design activity accordingly.

CSA is extensively used also in teaching courses both at the undergraduate and at the graduate level in the faculty of Institutional Communication in the Pontifical University of the Holy Cross in Rome. Moreover, CSA is used in continuing education curricula such the Web Project Management master for professionals held by the Swiss Institute of Pedagogy for Professional Education (ISPFP). Here, professionals from the industry appreciated the framework because they found it insightful for their understanding of the website lifecycle and they could apply useful tips (e.g. about website promotion and logfile analysis) to their website projects.

5. Conclusions

Today, there are many methodologies and models to test and analyze different aspects of Internet communication, especially those related to website usability. However, comprehensive approaches are lacking. CSA attempts to fill that gap. If contents, services, software and hardware are essential elements of a website, visitors and managers are no less important "elements" of website communication.

In our view, the importance of CSA is that it shows the interaction of these four elements among them and between them and the concerned communication market. This approach underscores also that the human factor cannot be left aside nor minimized in website analysis. The four dimensional CSA is not only useful to academics, but also has many practical consequences for the practitioners of electronic communication. For example, practitioners can continuously refer to the "Coffee Shop" framework (see Figure 1) as the project evolves. This would be a clear reminder not only to take into account both users and customers while negotiating design decisions, but also to recruit people with suitable competences in website communication, promotion and maintenance.

6. References

Alexander, E.T. and Tate, M.A. (1999). *Web Wisdom. How to Evaluate and Create Information Quality on the Web*. Lawrence Erlbaum Associates .

Bolchini, D., Randazzo, G., Paolini, P. (2003). *Adding Hypermedia Requirements to Goal-Driven Analysis*, Proc. 11th IEEE International Conference on Requirements Engineering, Monterey, California, USA.

Brinck, T., et al. (2002). *Web Usability – Web Sites that Work*, Morgan-Kauffman.

Brusilovsky, P. (1997). *Efficient Techniques for Adaptive Hypermedia*. in: Nicholas, C. and Mayfield, J. (Eds.), Intelligent Hypertext. Advanced Techniques for the World Wide Web. Springer.

Cantoni L. and Bolchini D. (2002). *Computer Mediated Collaboration in an Academic Setting. An Experience on Web Business Models at the University of Lugano (Switzerland)*, in Barker Ph. and Rebelsky S. (eds.), Proceedings of ED-MEDIA 2002, Norfolk (VA), I/228-233.

Cantoni, L. and Paolini P. (2001). *Hypermedia Analysis: Some Insights from Semiotics and Ancient Rhetoric*. Studies in Communication Sciences, 1, 33-53.

Cato, J. (2001), *User-Centered Web Design*, Addison-Wesley.

Garrett, J.J. (2002). *The Elements of the User Experience*, New Riders.

Ceri, S., et al. (2002). *Designing Data-intensive Web Applications*, Morgan Kaufmann.

Conallen, J. (2002). *Building Web Applications with UML*, Addison-Wesley Professional, 2nd edition.

De Troyer, O., Leune, C. (1997). *WSDM: a User-Centered Design Method for Web Sites*, 7th International World Wide Web Conference, Brisbane.

Garzotto, F., Paolini, P., Schwabe, D. (1993). *HDM – A Model Based Approach to Hypermedia Application Design*. ACM Transactions on Information Systems, 11/1, 1-26.

Geest, T.M. van der (2001). *Web Site Design is Communication Design*. John Benjamins.

Güell, N., Schwabe, D., Vilain, P. (2000). *Modeling Interactions and Navigation in Web Applications*, International Conference on Conceptual Modeling ER'00, Workshops on e-business and the web, Salt Lake City.

HOC – Politecnico di Milano (2001). *Hypermedia and Operation Design: Model, Notation, and Tool Architecture*, UWA Project, IST-2000-25131, Deliverable D7 (public) <www.uwaproject.org/downloads.htm>.

Holtz, S. (1998). *Public Relations on the Net: Winning Strategies to Inform and Influence the Media, the Investment Community, the Government, the Public, and More!*, Amacom

Introvigne, M. (2000). *So Many Evil Things: Anti-Cult Terrorism via the Internet*. in: Hadden, J.K. and Cowan, D.E. (Eds.), Religion on the Internet: Research Prospects and Promises, JAI Press, 277-306.

Lange, D. (1994). *An Object-oriented Design Method for Hypermedia Information Systems*, Proceedings 27th Hawaii International Conference on System Sciences, Maui, Hawaii.

Lee, S.C. (1997). *A Structured Navigation Design Method for Intranets*, Proceedings 3rd American Conference on Information Systems AIS'97, Indianapolis.

Lepori, B., Cantoni, L., Mazza, R. (2002). *The History and Practice of Push Communication: Some Critical Reflections*. Studies in Communication Sciences, 2/1, 149-164.