Functionalities and Elements of Communication and Social Interaction
Functionalities and Elements of Communication and Social Interaction in the context of Learning and Informed Environments in the Virtual Health Library

São Paulo / September 2009
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1. Introduction and Justification

Advance the development of health and adopt the dominions of research, education, promotion and attention to health, which includes the population, with equal access capacity to information, proactive participation in processes of transfer and exchange of scientific knowledge, of publication and reuse of these for the common good and improvement of the quality of life, represent some of the main challenges that the contemporary society faces.

The World Health Organization (WHO) expresses the importance and urgency or overcoming this challenge on stressing that one of the critical problems of the global public health is overcoming the so called “know-do gap” or the breach between what is known and what is practiced.

The technical cooperation strategy of the Virtual Health Library (VHL), coordinated by the Pan-American Health Organization (PAHO/WHO), through the Latin American and Caribbean Center on Health Sciences Information (BIREME/PAHO/WHO), is actually to contribute to the development and implementation of policies and public programs as well as products, services and events to consolidate and expand the capacities and infrastructures in scientific and technical information. Therefore, VHL comprises a regional and global public asset that is produced and used by all the countries through their institutions and individuals that produce intermediate and use scientific information and knowledge.

VHL is implemented through a work guide based on networks, learning and social participation on the Web, as a means of collective production of the sources and flow of information, both for the connected as well as non-connected communities. Therefore, it is proposed that the VHL contents should always be created and operated on the network.

Consequently, the capacities develop continuously in terms of the sources and flow of information, enabled by social networks. The environments that adopt, promote and sustain this modus operandi are called Learning and Informed Environments (LInfoE) in
the context of VHL and complementary networks.

The LInfoE allows the qualification and sustentation of knowledge transfer processes, which occur as social processes where individuals and groups involve in information exchange, experiences, ideas and know-how for solution, equating and understanding the situations and problems as well as in innovation processes. Although the act of knowing is individual and the knowledge is in the head of the people, the act of knowing occurs in social processes, exchange and interactions that occur between colleagues, teams, of work groups, of practical communities and social networks.

The methodology of LInfoE is based on a set of lines of action, adapted and enriched in agreement with the local environment. These are the respective lines of action:

- Humanized environment that stimulates continuous learning, mutual trust and appropriation of the history, culture and mission of the organization;

- Online operation of information sources of scientific, technical and factual nature;

- Collaborative spaces (ECOs) and Practical Communities (Co-Ps);

- Internal and external communication

- Operation in network of projects and identified processes, formalized with automation in network;

- Human resources development program, as priority to learning processes in network and oriented to increase the capacity of the action of employees.

The forms of communication and social interaction actions on the Web and also in attendance that enable these purposes are presented below, according to their definition, objectives and methods of use.
2. Functionalities and Elements of Communication and Social Interaction in the context of Learning and Informed Environments (LInfoE) in VHL

The functionalities and elements are listed below according to the format and/or method of execution, that is:

- In attendance and/or on the Web
- In attendance
- On the Web

2.1- Element of communication and social interaction in attendance or on the Web

2.1.1- Information events

**Definition:** In the context of VHL, an event is a set of activities developed in attendance, distance or combining both, with the purpose of sharing information and know-how, inform, spread, motivate and stimulate interest of a segment of the public, on a certain product, institution, topic or service (such as conference, congress, lecture, seminar, workshop, course, qualification, training, project meeting, work meeting, technical visit, etc). An event can also be an occurrence (commemoration, release, award, solemnization, etc) organized by experts, with institutional, community or promotional purposes.

**Objective:** The events are to promote the technical cooperation through the development and consolidation of the human capacities in terms of BIREME, of VHL and their complementary networks regarding the following:

a) develop local flow of information, local capacity to produce information and knowledge;
b) maximize the technical cooperation actions, exchange of experience and promote the inclusion of different actors in the national and international networks of VHL and complementary networks;

Use:

- Promotion, organization and development of scientific and technical events in the context of the corresponding Social Network which, on its own, is stimulated and consolidated by scientific and technical events.

- To consolidate the flow of information and knowledge through the availability of information services on the contexts generated in the context of the Contents Network, through information source networks of Promotion, Education and Learning events operated online.
- The expansion of capacities through methodological, educational and attendance and distant learning development actions in the context of Learning and Informed Environments (LInfoE). With integrated education programs for attendance and distant learning implemented through promotion and education actions.

The events like source of information, are organized and structured through the use of VHL methodology tools such as VHL Agenda (see item 2.2.1), which can be organized in a set of associated agendas to other Web services through a website or other events [VHL site] [see examples on: www.crics8.org; www.issi2009.org].
2.2- Functionalities of Social Interaction on the Web

2.2.1- VHL Agenda

**Definition:** Functionality on the Web that enables the methodological organization of the programming of information events.

**Objective:** Allow the structuring, through the calendar, time, dates, sessions, activities and participants that have associated work title, curriculum, presentation to their participation, in any format used (PPT, PDF, Full text, video, podcast).

**Use:** In the disclosure of information events on the Web, from start to finish, with the publication of presented works.
2.2.2- VHL Newsletter

**Definition:** Institutional vehicle of integrated communication published periodically in three languages (English [ISSN 1809-6859], Portuguese [ISSN 1808-7094] and Spanish [ISSN 1809-6840]) at the regional site of VHL and distributed to its subscribers by email. The content is elaborated through the collaboration in network; also know as, together with the Communication Staff of BIREME, elaborating the text according to the style of this channel of communication. In addition to receiving collaborations, the content is based on information provided in agendas (see VHL agenda), travel information and other sites of the VHL network, as well as the one provided in the internal bulletin “Para Sua Informação [For Your Information]” (PSI).

**Objective:** Maximize the visibility of the actions, events, advancements, experiences, practices, information and know-how in management and operation of sources and flow of information in the VHL and correlated network context.

**Use:** As a channel of news disclosure to the target-public firstly made up of authorities and representatives of institutions in technical cooperation, current and potential managers and professionals of the health sector, in addition to students, investigators and others interested in the related themes. This news is also published on the home pages of the VHL Network websites by RSS (see RSS).
2.2.3- Internal Bulletin “For Your Information [Para Sua Informação](PSI)”

Definition: Institutional vehicle of internal communication with daily update, operated by the communication department in collaboration with a network of organized reporters in thematic channels. This network is made up of BIREME employees that elaborate, publish or indicate contents for the PSI, related to the activities of their areas of operation. In addition to receiving collaborations, the content also comes from information provided on online agendas (see WebCalendar), in travel information and other sites of the VHL network.

Objective: Disclose institutional or BIREME-related activity information, spread the information and expand the knowledge related to the operation of the institution and results achieved by the teams. The vehicle also seeks to promote the sharing of experiences, integration and development of employees, as well as promote the interpersonal relationships and consolidate the culture of the organization, motivating greater efficiency and productivity.

Use: Used by the internal public. It is a means of communication to enable the sharing of activities that are often formalized in technical information and that through the internal bulletin PSI, the language becomes more accessible to the employees of all the areas of the institution.


2.2.4- Alertas (e-Alerts)

**Definition:** Institutional marketing email for spreading published or non-published news in internal communication channels, sent to all BIREME employees.

**Objective:** Support, give visibility and promote the access to information on BIREME activities. The e-alert also calls attention to strategic actions or most important news published in the internal bulletin PSI.

**Use:** Give strategic visibility to the institutional actions and technical cooperation to the internal public by highlighting the facts in context (activities in terms of projects, travels, technical cooperation visits, internal and external events, commemorative dates).

The second section of the e-alert contains links to the most recent publications in the internal bulletin PSI and news published in each thematic channel.
2.2.5- Media Sites

**Definition:** Methodology for production, storage and publication of multimedia documents in VHL, the Media Site enables the storage, cataloguing, exhibition and sharing of non-textual content directly on the Web.

**Objective:** Creation of a multimedia content repository (video, audio, images), operated in network by institutions creators or content certifiers, ensuring the quality and contextualization.

**Use:** The exhibition page of each information resource is it video, audio or an image, includes its description, comments and the following metadata: note, author, publication data, duration, number of visualizations, tags and categories. Also includes links to Embed codes and permanent link that enable the reference to this information resource or also includes them in any Web page without having to copy them.

- **Photologs**

Photologs in VHL are used as a tool to cover events and disclose events related to the VHL network in the context of the Learning and Informed Environments (LInfoE).
2.2.6- Learning and Informed Environments (LInfoE) Site

**Definition:** The Learning and Informed Environments (LInfoE) Site offers the institution a space to manage sources of information and for social interaction on the Web.

**Objective:** Subsidize the establishment and the development of learning environments in the institutions, giving privilege to healthy environments to improve the quality of personal and professional life and the increase in social capital of this community.

**Use:** Information sources of interests are operated for employees of the institution. On one hand, information sources related to the knowledge expansion of the learning environment are collected, organized and indexed in a cooperative work in network and, on the other hand, an environment and interaction services are promoted for this community to record the existing knowledge.
2.2.7- Hot-site

**Definition:** Hot-site, Micro-site or Mini-site is a small site programmed for a specific marketing or communication site with duration relative to this action.

**Objective:** Disclose event, service, commemorative date, campaign, etc.

**Use:** Used by the management of the institution as a specific communication action.
2.2.8- Human Resource (HR) Management Page

**Definition:** The HR management system of BIREME comprises a set of applications to manage the personal and professional information of its employees.

**Objective:**
- Centralize the registration information of employees by storing in databanks and create a source of information in the model of the virtual health library (VHL).
- Create small applications that connect to the HR system through Web services for the creation of personalized pages;
- Offer an interface that allows access to tools and systems users need to perform their daily activities
- Aid employees in knowing the institution, be it through the organizational structure or through the employees.

**Use:** The system used at BIREME to optimize the registration processes and administration of personal and professional information, as well as record the competences and activities, establish an internal social network that allows interconnection of the areas through a Web interface.

This application conform a virtual environment destined to consolidate the organizational structure based on the approach of Learning and Informed Environments (LInfoE).
2.2.9- Web Calendar Agenda

**Definition:** The online agenda available on the Internet to Bireme employee. Uses the WebCalendar system (http://www.k5n.us/Webcalendar.php) with the interface customized for BIREME.

**Objective:** Allow the recording of activities of employee and reserve of infrastructure resources, enabling the management of institutional activities; contribute to the transparency of the institutional activities; provide information to spread the activities through the Communication department that uses the agenda to elaborate news for BIREME communication vehicles (see items PSI, Plasma TV, Mural).

**Use:** All employees can use the system to record activities from their institutional username and password. The same system is used to reserve meeting rooms and traveling equipments. The records can be categorized (for instance, “Personnel”, “Meetings”, “Projects”, etc), visualized publicly or privately. The employee also defines “assistants” or other users allowed administering certain agenda. The system allows all employees to view the agenda of all users, and it is possible to group the visualizations by sector, by jobs or other forms determined by the user. Daily, the communication department checks the recorded tasks to elaborate news for the communication vehicles (see items PSI, Plasma TV, Mural).
2.2.10- Collaborative Spaces

Definition: Integrated to VHL, in the current paradigm of participation on the Web, the Collaborative Spaces promote and enable the use of formal communication channels by certain social networks, which record, enable the recovery and expand the spreading of their ideals and knowledge. (ECO Site http://ambienteaprendiz.VHL.br/portal/eco/html/pt/index.php)

Objective: Enable the insertion of information and knowledge of its members in their news, documents, images, discussion forums, chat and blog areas, among others, characteristic of this source of information, for sharing and expansion of social capital. Formalized, the information is published as Source of Information no. 5 of VHL, which is, the participation and publication of user information on the Web.

Use: Used by members of the social network, to connect people wanting to share relevant information on specific themes; in initial works to establish in VHL; to capture and diffuse existing knowledge; possibility of dialogues, promote learning and collaborative processes; aid to organization to achieve the co-defined objectives and generation of new knowledge.
2.2.11- Blog

**Definition:** Dynamic and fast update communication tool made up of a structure that allows the update through articles or “posts”, they are generally organized in inverse chronology. This way, on accessing the blog, the reader accesses the most recent update first. It is different from the sites or hot sites by the language, dynamic update, organization of publications by date, search for certain debate or reflection on a theme or event, in addition to being a space for historical record of the development of certain event.

**Objective:** Promote the horizontal communication (among all), allowing any one to send the messages through posts or comments. In the context of VHL, the objective of the Blog is to spread information related to its priority theme and encourage the participation of users with comments or posts.

**Use:** As a fast communication tool and that reaches a very high number of readers in a short space of time, can be used as a communication channel from a certain Site or as a tool to cover Events. Using categories, the information contained in the blog can be organized, enabling the consultation. Through the RSS services, the readers can stay informed on the updates of the Blog. The texts, in a more personal and informal style, seek to remain open (with the external links related to the text), always referring, when possible, contents used for the production of each post (information, videos, other sites, etc).

**Some Blogs Used at VHL**

Coverage of Events: VHL 5, ISSI2009

Thematic Blogs: TropIKA.net, Telessaúde Brasil
2.2.12- RSS

**Definition:** RSS is the abbreviation of Rich Site Summary or Really Simple Syndication, i.e., which is a simplified manner of presenting the content of a site. An RSS document is developed in XML language and serves to add content, and is accessed through programs or added sites. Through its feature of using news, the RSS documents are also called Feeds.

**Objective:** Allows the user to follow-up the update of contents in real time, without having to access the place where the information is published.

**Use:** The application of this tool at VHL contributes to improve the information, alert and selective spreading service, considering that the own user is free to choose relevant and important content of its interest, interactively, rapidly and objectively, because the service can be activated at any time because it is a Web application.

**Examples of use in the VHL platform:**
Virtual Health Library, VHL Newsletter
2.2.13- Wikis

**Definition:** Collaborative softwares that allow the collective editing of documents, edited by users that browse them, without the content being necessarily reviewed before publication. A history of changes in a page can be consulted, at any time, and if necessary a filed version can be republished by the user that created the page or by another user with authorization for this purpose.

**Objective:** In the scope of the Virtual Health Library, the Wiki pages have the main purpose of offering users of VHL networks and complementary networks a service to create collaborative pages, as support to the collective knowledge construction process and promotion of Learning and Informed Environments.

**Use:** Used by staffs, in different locations, to move communication, previously performed by electronic mail, to a more democratic and participative platform, promoting the effective participation on the Web.

**Examples of use in the VHL platform:**

**Collaborative Spaces**

The Wikis are operated in the Collaborative Spaces of VHL as support to the formulation of projects, records of minutes of meetings, collective creation of reports and other documents.

In the figure on the side, the Sustainable Development Collaborative and Environmental Health Space and its wiki page for the formulation of the VHL SDE Project.
2.2.14- Chat

**Definition:** It is a form of contact on the Web where two or more persons can chat online through free or private chat channels.

**Objective:** Enable the execution of virtual meetings with the participation of individuals in different locations, for fast discussions, with appointed time or online service to specific demands.

**Use:** As a source of information in the Collaborative Spaces, after performing a chat, this is recorded in a document for availability to other members of the social network.

2.2.15- Distribution Lists

**Definition:** Allows the creation of discussion groups only using electronic mails. It works through a lists server, program responsible for keeping the name of users that subscribe to the service. The users use the electronic mail to send messages to the lists server, which sends a copy to each one of the participants.

**Objective:** Disclose information and themes of interest and discussion for a specific group.

**Use:** Used by groups with specific interests.

Elements for consolidation the social interaction.
2.3- Elements for Social Interaction Consolidation

2.3.1- Historical Legacy Panel

**Definition:** Wall at the entrance of the institution stating its mission and history, updated every new cycle it completes (BIREME commemorated 42 years of existence in 2009), and also presenting a list of names of all employee with the institution during these years of activities.

**Objective:** Provide and encourage a humane environment, which stimulates mutual trust and the appropriation of the history, culture and mission of the organization.

**Use:** Used by the management of the institution to record its history.
2.3.2- Plasma TV

**Definition:** From the technical point of view, Plasma or LCD TV devices are connected to a computer that executes an application to show the texts and images published on the internal bulletin of BIREME, the PSI bulletin.

**Objective:** Give information on activities, events and ongoing campaigns, on TV devices located at strategic points in the building, such as the reception or corridors of high circulation, to make this channel of communication more effective, with the aim of consolidating the BIREME approach to promote the Learning and Informed Environments.

**Use:** For daily carrying of updated news on the highlighted activities and events, such as visitors, meetings, employee in external missions, mobilization campaigns, etc. for the internal public and visitors.
2.3.3- Information Mural

**Definition:** Additional communication vehicle for electronic publications, available in printed pages attached to panels located on each floor of the institution, for publication of institutional information and news or those of interests of the employees.

**Objective:** To be an element of integration with online publications, updated every 15 days by the Communication department, with information in highlight in the internal and external communication vehicles (see PSI and Newsletter).

**Use:** Used by employees and visitors in general, with emphasis on institutional information and information of interest of the target-public such as dates of benefit distribution, commemorations and birthdays of the months, in addition to general warnings and internal or external campaign posters on activities connected to the products and services developed by BIREME.
2.3.4- The BIREME knows what it knows Program (Programa A BIREME sabe o que sabe)

Definition: The BIREME sabe o que sabe program covers activities of learning and transmission of information and knowledge, called information events, inter-employee, inter-teams and inter-institutions, and is based on the methodology of Learning and Informed Environments in the context of VHL and complementary networks.

Objective: Inform, share knowledge, lessons learnt, methodologies, processes, technology and everything that can collaborate with the increase of intellectual and social capital of LInfoE.

Use: Used by all employee of the institutions and network members.
2.3.5- Space for reading and reflection

**Definition:** Internal meeting and information sharing environment organized to promote reading, with books and magazines available for self-checking, materials that are brought and kept by the employee.

**Objective:** To stimulate inter-relationship, reading and writing.

**Use:** Used by employee of the Institution.
2.3.6- Integrative social activities

**Definition:** Social activities are events that unite employee and guests to commemorate, emphasize or share certain occurrences of importance to a social network.

**Objective:** Promote and encourage humane environment of the institution, which stimulates mutual trust and appropriation of the history, culture and mission of the organization, with emphasis on the individuality of each one.

**Use:** To promote commemorative events like birthdays, leisure activities and end of the year fraternization, social campaigns and the commemoration and fraternization of the birthdays of the month.