

# Strategies for participation of learners in virtual learning communities

**Thomas Berger**

Institute of Interdisciplinary Research  
inter.research e.V.  
Kurfuerstenstr. 15,  
D-36037 Fulda, Germany  
+49 661 25040-11;  
berger@inter-research.de

**Dr. Laurent Borgmann**

Department Languages/International  
University of Applied Sciences Koblenz/Remagen  
Rhein Ahr Campus, Südallee 3,  
D-53424 Remagen  
+49 2642 932 329,  
Borgmann@RheinAhrCampus.de

## ABSTRACT

In this paper, we describe the work in progress to develop strategies for participation of learners in virtual learning communities as a contribution from the didactic side to the design of participatory educational environments. The work is carried out in the framework of two ongoing European projects; "Intercultural Community Projects in a European Context" within the European SOCRATES-Programme and "TEECH-in Transactive Exploration of European Cultural Heritage - in Intercultural Teams" within the European CONNECT-Programme.

## Keywords

Virtual learning communities, distance education, dramaturgical concepts, integration of real world events, digital means of expression, media awareness, intercultural awareness, role of designers

## PROJECT DESCRIPTIONS

Both projects are carried out in a team of European institutions and are partly financed by the European Commission, Directorate General of Education and Culture.

### SOCRATES-Project

The first project combines two teaching modules in the field of language and intercultural learning. In the first module learners from different universities in Great Britain, Sweden and Germany take part in an Internet Simulation called "Jobs and Applicants". In the second module these learners meet each other during an Intensive Programme, a project week in Ireland, which is documented in the Internet.

#### *Internet Simulation "Jobs and Applicants"*

One learner group analyzes the excursion of the second module for necessary jobs to be completed before and during the intensive programme. They design online-job advertisements as for example for a travel and accommodation manager, a sponsoring manager, a public relations manager etc.

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Learners from the other teams apply for these jobs. They write applications tailored to the specific jobs putting into practice the theory of how to apply for a job. The applicants are encouraged use all kinds of media (Web- or Homepages, video...) to support their application. For each manager position three candidates for job interviews are selected by the "employers' group". The job interviews are done via video conferencing. Later the transcripts are analyzed. The successful candidates can then in their new position as managers choose two assistants, who have to be from different countries than the home country of the manager. These intercultural teams prepare the excursion and intensive programme in Ireland. The student jobs are paid with a symbolic salary.  
*Intensive programme in Ireland*

In the second module the programmes turns "from virtual to real". In the first phase the participants still communicate via the Internet (Email, chat, discussion lists and forums...). The different teams headed by the student managers have to carry out the managing tasks related to the excursion to Ireland. During the intensive programme in Ireland learners offer their knowledge and their cultural background on a "give and take" basis to their Irish host community (Achill Island, Mayo County). As for example one group offers their IT-knowledge to assist in setting up a web-site for the Achill Island Journal "Muintir Acla". In return the publishers of the journal organize a cultural evening with Irish music and lyrics. Another group follows the footsteps of the German author and Nobel prize winner Heinrich Böll, who lived and worked on Achill Island. He wrote "The Irish Journal" (Irisches Tagebuch) on the island. This work of Heinrich Böll provides also a metaphor for the "Student Online Irish Journal". This journal on the web is updated daily so that the excursion can be followed by friends and relatives of the participants. In the same time it is a communication platform with the members of the Achill Island community. Participants reflect their project work and experiences of the day in a creative manner and get feedback from visitors of the journal in the Web.

### CONNECT-Project

The second project aims to connect the fields of culture, education and new media. European railroads are providing the context for a Web-story collaboratively created by students

from various partner institutions in Austria, Finland, Germany, Great Britain, Ireland, Italy, Spain and Sweden interacting with a European or even worldwide audience. The interaction between project participants and the interested audience takes place in the Internet or when the literary journey turns from virtual to real – at events (e.g. performances of a part of the story) and intercultural encounters (e.g. workshops related to the Web-story) in the real world or at the finale of the story, an intercultural workshop at the western coast of Ireland in the artists' community on Achill Island. The educational goals of the project are

- to sensitize students to the cultural heritage of their own country and of their European neighbours
- to train students using the new media such as the Internet as a transactive medium for open collaborative creativity
- to encourage students to perceive intercultural aspects and the different European mentalities as a valuable resource instead of a threat and to create opportunities for them to work in intercultural and interdisciplinary teams

The metaphor of a train journey provides a set of rich cultural connotations, e.g. in the fields of European history, architecture, technology, visual arts and social issues such as immigration. The plot of the story starts at the different partner locations and consequently has different beginnings which are connected using hypermedia structures. Every group creates a main character for the story and will write and illustrate the journey of the character to the final meeting point on Achill Island (Ireland). A very basic structure including some intermediary meeting points of characters of the story are predefined. The rest is open for the imaginations and the fantasy of the participants. Students thereby collaborate using Email, Web-fora, discussion lists and video-conferences. The whole process is moderated and facilitated by a team of coordinators (teachers, artists and cultural operators). The main action of the project takes place between several "kick-off events" in Europe in September and October 2000 and the workshop finale on Achill Island (Ireland) in February 2001.

#### PARTICIPATION STRATEGIES TO EXPLORE

During the project preparation and during test runs we have developed several strategies to encourage learners to take up an active role creating a virtual learning community. These strategies foster the interaction between distance learners, which we regard as the most valuable asset of the Internet-communication network for the purpose of (distance) education. Hence we concentrate our work on computer mediated *communication between humans* rather than the interaction of humans with a digital system. From a didactic viewpoint we regard the dramaturgical framework for activities of the learner community as decisive to support elements of participation, which Smith and Kollock [6] call *reciprocity* and *reputation*. We see the seamless integration of real life

encounters as essential for the *attachment* of learners to the *group* and media and intercultural awareness as conditions that participants get a *sense of efficacy*.

#### Dramaturgical framework for activities of the learner community

The motivation of learners to participate in a learning process depends a lot on the feedback they get from fellow learners. During the preparation of the project we develop a certain dramaturgical framework to create sufficient opportunities for participants to give informal feedback to each other. The provision of feedback has a technical level and a didactic level. From a technical viewpoint the framework should optimize the "interaction space", which is defined by the time cycle of interaction and the awareness of the communication partner (based on the model of Chen and Gaines [4]). The time cycle consists of the time to create and send a message, the time until the receiver discovers the message, the time the receiver needs to create and send the answer and the time until the original sender needs to discover the answer. The different communication channels of the Internet, such as Email, Chat and the Web have different time cycles and a different grade of awareness of the communication partners, which is illustrated by Figure 1. Besides the communication channel it is the computer and Internet literacy of the learners which influences the time cycle. Furthermore the different communication channels require different communication skills. In intercultural teams learners often have to communicate in a foreign language. To optimize the interaction space in our projects we tend to use a combination of Web, List server and Email based communication, which may be enhanced (task-specific variety) by video-conferencing, chat or other communication channels. For all advanced channels (regarding technology, computer literacy or communication skills) the project coordinators always try to provide a low-tech (e.g. Email or telephone) alternative.

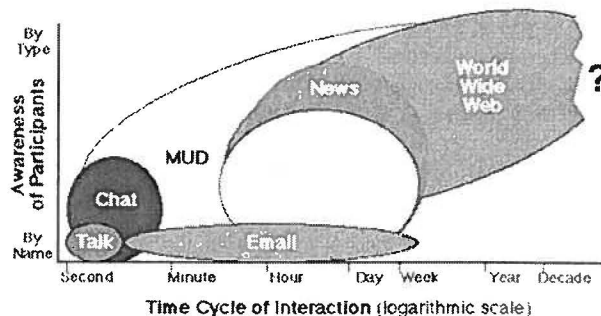


Figure 1. Model of interaction space by Chen and Gaines

The technical viewpoint however is incomplete without a didactic viewpoint, which is also very important for the creation of feedback opportunities. These feedback opportunities should be planned in advance but ideally integrated seamlessly into the dramaturgical framework of an educational module.

In the first project there are a number of feedback opportunities which just follow the logic of the Internet simulation game, which provides the dramaturgical framework for the project. The different steps of the application process provide an authentic context for the interaction between learners. These steps are

- getting in contact with the "employers" (job ads),
- preparation of the application material,
- selection of candidates for job interviews,
- selection of successful candidates for the student manager positions based on the job interview and the application,
- selection of assistants by the managers based on the application of the assistants and
- preparation of the intensive programme in Ireland by the different virtual teams of managers and assistants

Furthermore the simulation has an element of competition, which is an additional factor for the motivation of the learners.

In the second project it is the collaborative creation of a Web-story which provides the dramaturgical framework. The following project elements increase the feedback opportunities:

- creation of main characters of the story: when learners at the different partner institutions create their main fictional character for the story with recognizable attributes such as a specific profession they will do research and interviews with real life persons (initial contacts are provided by facilitators), drawing the attention of a potential active audience to the web-story and increasing the chance of external feedback about the ongoing web-story
- "kick-off" events: project presentations at science fairs and guided cultural excursions at the different European partner locations increase also the public awareness of the project and the external feedback opportunities
- fixed fictional meeting points of Web-story characters : as part of the basic story structure provided by the facilitators there are fixed fictional events, where at least some of the fictional characters will meet including the finale, when all characters meet on Achill Island (Ireland) (as project participants do in real life as well); these meetings of characters make the hyperfictional story more interesting, as several perspectives can be combined and inter-linked; they require but also quite an amount of coordination and communication efforts by the learner groups and thereby create a number of feedback opportunities

- interest in story characters: the elaborated attributes of the fictional characters and the knowledge of the fixed fictional meeting points help create a natural interest in the "adventures" of the different characters, facilitating the creation of side story paths and side characters by fellow learners or by the interested audience as a creative feedback
- elements of competition/games: as the element of competition turned out to be so successful in the first project it is planned to introduce such an element in the Connect-project as well, inspired by the common high scores of computer games, such scores can be collected by participants at feedback relevant points – e.g. the number of "incoming" and "outgoing" links, which lead to story elements, created by fellow project participants and the relevance of links created by a project participants, judged by a jury of fellow participants and the audience (according to S. P. Tosca the relevance of a link is determined by the satisfaction the recipient gets from it, because he or she finds what the recipient looked for or the recipient is rewarded with valuable contextual effects [7]), depending on the score of the participants they can get free (train) rides to real life events of the project

The accompanying real life events, described later in this paper facilitate the immersion of the participants into the Web-story and increase the feedback opportunities (feedback by fellow participants during the organisation of the events, feedback by audience).

#### **Seamless integration of real life encounters**

Studies of virtual communities show that real life encounters of community members increase the social bindings in the community (see e.g. [5]). From a didactic perspective the natural need of participants to see their virtual partners in real life can be used to motivate participation of learners in the virtual learning community. However for the greatest effect the real life encounter should be integrated seamlessly into the dramaturgical framework, as described for the feedback opportunities.

In the SOCRATES-project the encounter at the intensive programme in Ireland is an integral part of the project. The combination of the Internet Simulation "Jobs and Applicants" with a real excursion with "real" student manager jobs as a "dramaturgical interface" makes the real life encounter even more plausible to the learners. In the same time the Internet Simulation appears more realistic – because it is no longer a simulation. What students create has an influence on the real world.

In the CONNECT-project the final real life encounter is also an integral part of the project, as a finale. When the virtual and fictional story turn into real and vice versa this is also a highlight of the project. Learners know from the start that

they are working toward this final real life encounter. On their way to the final destination Achill Island (Ireland) they will follow partly the journey of their story characters. However within the CONNECT-project more real life encounters with participants take place. These meetings are also integrated into the Web-story. Either they are related to fictional events of the story (e.g. public performances of fictional meetings of main characters of the story at real life settings) or the encounter stimulates a certain development of the story plot, so that the encounter can be recognized by the participants by its influence to the story (e.g. workshops and excursions addressing socio-cultural and creative aspects in the story-context).

#### **Use of media specific means of expression**

In order to participate in an Internet based process/project users have to communicate their ideas using the new media. This can be done most efficiently when they are able to use media specific means of expression. Facilitators should thereby take the aspects of the computer-literacy and media awareness of learners and their language skills (when learners are expected to communicate in a foreign language) into account.

#### *Media awareness*

The Internet as a communication media offers a rich set of multi- and hypermedia means of expression. However in practice we experienced that it requires careful planning to provide learners with access to this means of expression. For example when learners are not used to check their e-mail or a shared discussion board regularly or are not used to type quickly in a chat place it has negative effects on the time cycle of interaction and the whole communication process. In a small test run for the CONNECT-project we wanted to use a free Web-service to provide discussion-fora and easy upload opportunities for different kind of files (onelist.com or egroups.com) We soon found that many participants failed to register for the service, as the registration process is designed from a technical perspective and not very plausible for non-technical users. Consequently, always try to provide a low-tech alternative way of communication for participants who are less computer literate. Furthermore the projects are complemented by offers of training of media competence for the participants. However if ever possible this training is integrated into the dramaturgical framework to get participants motivated to take advantage of this training. For example in the SOCRATES-project knowing how to prepare and how to act in a video or chat conference with an employer or how to prepare an attractive web-presentation to complement the curriculum vitae provides participants with a competitive advantage over fellow participants of the Internet simulation. In the CONNECT-project knowledge about using hypermedia structures, e.g. link patterns such as cycle, contour, counterpoint or sieve (see also [2]) helps participants create more relevant hyperlinks, which is internally rewarded within the project. Combining the training with a plausible advantage over other participants in the project dramaturgy makes them

realize how they participate in a Web-based learning environment. As part of the training it is necessary to find non-technical metaphors for the new media for example to make the Internet services more "graspable" to a non-technical audience (in our experience abstract technical terms such as Internet protocols should be avoided). In the CONNECT-project this approach can be integrated in the dramaturgical framework as well, using the railroad metaphor of the Web-story also as a metaphor for the Internet (comparing the browsing of the Net with a journey on a train and the railroad network with hypermedia structures: e.g.: "navigating the internet is just like making a complex train journey").

#### *Participants' language skills*

Virtual learning communities often have international participants and English as the "lingua franca". The different Internet services or communication channels respectively require different language skills, e.g. chat places require oral language skills and the ability to formulate quickly in an informal way, list servers require a good command of written language, while video-conferences and in a different manner the Web also allow the use of nonverbal language. Preformulated phrases can help non-native speakers to react quicker in situations, such as chat-conferences, good on-line translation tools and dictionaries and the provision of task specific vocabulary can support non-native speakers when writing for list servers or web presentations. In the SOCRATES-project the language training is part of the pedagogical goal of the project. In the CONNECT-project we provide helpful vocabulary for writing the Web-story. Furthermore there are many opportunities for nonverbal contributions (illustrations, sounds, video-sequences etc.).

#### **Intercultural awareness**

Different cultural backgrounds of participants (another common attribute of virtual learning communities) can be a threat but also a valuable resource for participative activities. Participants should be sensitized to cultural differences, which might create difficulties during the project, from simple aspects such as different time zones (when making dates for online-meetings) or different meanings of colors and signs in a specific context to more complex issues of different communication styles (e.g. different cultures have different ways of expressing criticism). We try to integrate the intercultural learning experience into the framework of the simulation (SOCRATES-project) and the Web-story (CONNECT-project) for a richer, longer lasting educational effect. For example the experience of a missed on-line job interview in the Internet Simulation, because of the time difference between Greenwich and Central European Time or when the communication partner behaves very different than expected (e.g. during the job interview) makes the project participants more aware of intercultural aspects than an isolated intercultural training. The theory of intercultural differences within Europe is so much more relevant when some students have already learned "the hard way". Consequently, in these examples intercultural incidents and negative experiences

are the starting point for intercultural awareness training. Although it is quite effective there is a danger that cultural differences get an image of an impediment, something you have to overcome to be able to reach a goal in a multi-cultural team. As a counterpoint to this rather negative view we want participants to experience that cultural differences can be a source of valuable contributions to a common goal and something to enjoy as well. In the SOCRATES-project this can be best achieved during the Intensive Programme in Ireland, when the participants work together in small community projects. For example in a history project about immigration in Ireland and on Achill Island (the host community in Ireland for the programme) every participant can contribute a different, culturally determined viewpoint as most of the home countries of the participants faced the issue of immigration in their history. E.g.: when participants translated an introduction to the community for the community homepage into their native languages participants experienced that a valuable contribution to the community could be made with relatively little effort – provided the group is international. In the CONNECT-project the different main characters of the groups are a projection area of the different cultural backgrounds. Participants explore that the different viewpoints make the whole Web-story richer and more exciting. Following some of the side paths of the Web-story containing cultural background information is rewarded by more satisfaction when browsing through the story, e.g. by understanding jokes and other cultural references.

#### DESIGNERS AS FACILITATORS

Designers and educational facilitators have a lot in common in respect to the need of constructive participation of learners and users respectively. We expect the development and improvement of strategies, which motivate learners and users to participate and which facilitate the participation process to be helpful for the digital design of web based educational environments. We would be grateful for any comments and

contributions to our work in progress. As an outlook we plan to prove and improve the results and hypothesis of the SOCRATES and CONNECT-project in a following international project called "ViBES Vicinage in Europe – Bridging real and virtual communities in intercultural Explorations of 'inter-spaces'".

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