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“Telling you in pictures” - Communication Bridging Languages

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Abstract

There are lots of articles at international level dealing with several aspects of virtual communities, e.g. how the social relationships are forming and enduring, how the online learning could be the most effective and how it could be facilitated by embedded tools and mentors. This is the case – if adolescents and adults are considered! But in what circumstances and what kinds of knowledge could 8-11 year old children learn at a distance, what kind of tools they are need, how should mentors behave to facilitate children's learning? How could be realized the online collaboration between children if they are speaking different languages? TeaM Lab tried to answer these questions during the Colabs project and by setting the Picture Communication experiment – the process, results and conclusions are presented in this paper.

Keywords

Multicultural collaboration, visual communication, learning at a distance, creativity

1. The Colabs project

The two year Colabs Socrates Minerva project's (101301-CP-1-2002-1-HU-MINERVA-M) aim is to set up infrastructure for collaborative work, to provide answers for guiding research questions: with whom, how and what kinds of knowledge should children learn at a distance and how best can they be supported in this learning; and to develop learning tools that can enhance children's visual communication and creativity skills and can be transferable into several domains – additional information is provided at the official website <http://matchsz.inf.elte.hu/Colabs/>.

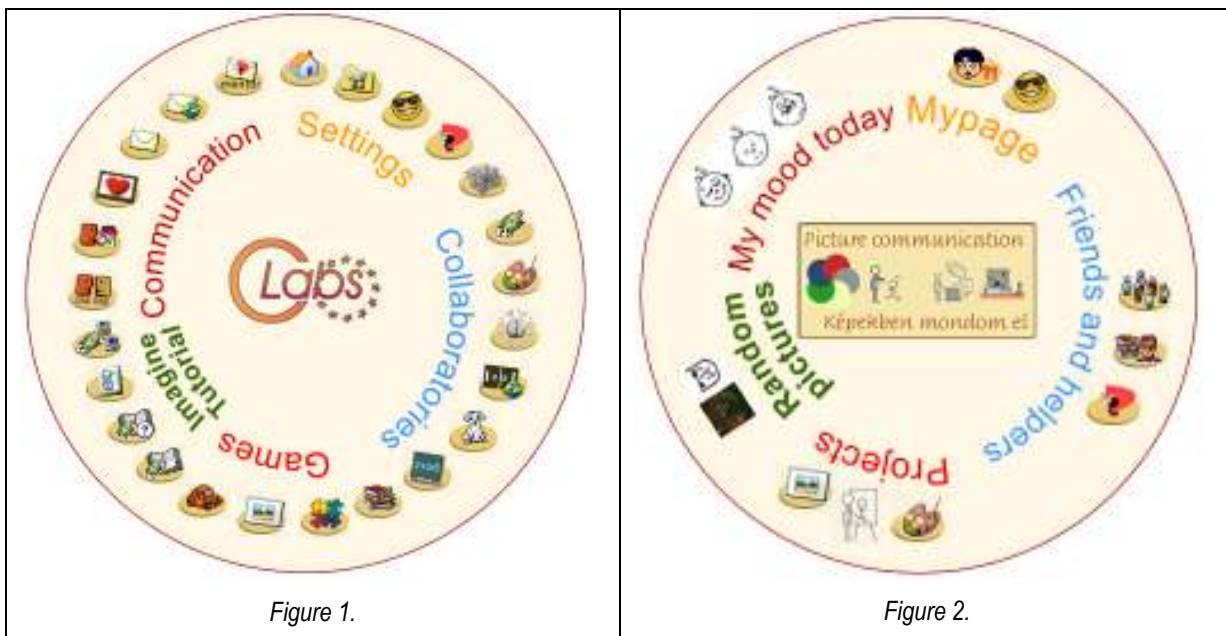
2. Communication bridging languages

A major challenge of ICT and ODL in the 21st. century is to find ways to support children in building and testing models collaboratively across European cultures and beyond, where they will not just talk to each other across the net, or simply share information but be engaged in long term planning, construction and debugging. Communication plays an important role in collaboration, thus the elements, ways, methods, and forms have to be mastered in order to facilitate self expression. The need for new multicultural, multilingual and multimodal approaches to computing, learning and communication is crucial. We researched a model of e-learning platform and produced active web materials that provoke children, teachers, tutors and parents to act collaboratively on a networked learning environment.

3. The set-up and the possibilities of Colabs portal

The portal was realized in the PHP-Nuke content management system. “The PHP-Nuke is a free web portal system based on PHP and SQL, part of GNU project, free software and open source software” (citation is translated from: <http://www.php-nuke.hu/>). Naturally, the portal system was completely rebuilt and adapted to fulfil project’s requirements. The tools provided by the system were divided into several groups with different visual looks. There are also lots of visual elements built in, which is important for children in such age.

Children could join to three main activities, use activity-maps for orientation. Mentors and adult group leaders could use both textual project orientations and activity-maps. There are several levels for exchange thoughts between one another both synchronously and asynchronously (1. figure).



Levels for asynchronous communication:

Textual communication level – based on common written language. Children could communicate in such form both through the Brainstorming area and through the International Forum area. The Brainstorming area provides microworlds that raise topics to write composition about – e.g. microworlds generated random story titles - and to exchange ideas

on – e.g. microworld generated random wisdoms and proverbs -. Children could use Internet translators and help form mentors to figure out messages in different languages.

Picture communication level – communication through iconic language. Picture encyclopaedia (3. figure) area provides a starter set of words in different languages explained using pictures or animations. There is a predefined standard in the definitions since nouns are explained by using colored pictures, adjectives by black and white abstract pictorial symbols, verbs by animations and prepositions by using black and white symbolic expressions. The collection of words is chosen in order to give a starting set to express an introductory on oneself using international understandable symbolism. The symbols can be further extended by children within the same predefined standard and also used within Iconic story telling authoring microworld, which allows the production of international “text” that can be published as Internet pages.







| | [en] | [hu] | [de] |
|--|--|------------------|-----------------------------------|
| Other [en] Egyéb [hu] Andere [de] Ine [sk] Otro [pt] |  Super shopping center | bevásárlóközpont | das Supermarkt |
| Elök [hu] Living [en] Lebewesen [de] Žive [sk] Vivo [pt] |  | face | arc das Gesicht |
| Nature [en] Természet [hu] Natur [de] Příroda [sk] nature [pt] |  | dog | kutya der Hund |
| Adverbs [en] Határozók [hu] Adverbe [de] Příslůvka [sk] Adverbi [pt] |  | under | alá unter |
| Verbs [en] Igék [hu] Verbe [de] Slovesá [sk] Verbo [pt] |   | lay down put | fektet rak legen stellen |

Figure 3.

Abstract self-expression level – based on products created using given tools. The Creative tools area, where users can express themselves using the tools in various modalities and exchange their works with others to comment.

Authoring level - based on communication through Imagine script. The Exchange games area, which provides educational games, which can be easily modified to change content, topic or subject and thus provide a frame for developing further games on different domains. Children are also provided an online Imagine tutorial on the portal, and they can construct their own microworlds, download and modified those of others.

All microworlds are designed in a standard way, to allow transfer of creations through the Clipboard and ease users by providing nearly the same functionality based on products created using given tools.

Steps of asynchronous communication are the following in all cases: child have to save the pictures made in microworlds or own Imagine programs, and after upload to the according forum area, where others can post comments to child’s work. Works of other children could be downloaded from the forum area and then modified.

Synchronous communication is realized both through well-known Chat tool provided by the system and through games in Online games area - Paint and Word Cards game.

Microworlds were developed in Imagine™ authoring system (<http://www.logo.com/>), developed by Slovak partners. Imagine is an open and flexible learning environment and authoring tool with complex tools for painting, animating, web authoring, creating multimedia, using speech input/output as well as Logo programming. All partners made the localised version of Imagine™ to let the children program in their native language.

4. Picture Communication experiment

After the analysis of results and experiences from the Colabs experiment, some important changes in the PHP-Nuke environment and experiment structure were made, and after the Picture Communication experiment was set:

http://matchsz.inf.elte.hu/Colabs/colaboratories/portal/pict_com.htm

The duration of the experiment: April 18, 2005 – June 15, 2005. Groups of children from Slovakia, Bulgaria, Litvania, Japan and Hungary are participating in the experiment.

Aims of the Picture Communication experiment:

- To provide experience for children in attaining and practicing communication of thoughts between cultures not speaking any common language.
- To provide a meeting place for making acquaintances and developing friendships with children around the world and to provide experience for children on evolution of relationships in a virtual society.
- To expand children's thinking, beliefs, expectations, knowledge and view about different cultures around the world.
- To enhance children's fantasy, self-expression, creativity, skills in communication and social sensitivity, both in real and in virtual community settings.
- Learn foreign words and language, and last (but not least) - when finding a common language for interaction - to develop communicative skills in that language.

Children could join to one or both of the following activities:

Re-interpreting your picture

Motto: "You do something and then somebody else comes along and does it pretty." (Pablo Picasso)

Children look for interesting artworks on the internet makes reinterpretations of these art pieces and uploads own creations to the Gallery. They could also modify and comment reinterpretations of others. They are given several microworlds to support the reinterpretation process by textures, shapes and artworks. They can choose between this tools and use the most appropriate.

Telling you in pictures

Motto: „Art does not reproduce what we see. Rather, it makes us see.” (Paul Klee)

The activity encourages extension of the *Picture Encyclopaedia* with further icons, telling each other stories by pictures, and reinterpret stories of others..

5. New design of the Colabs portal: the Picture Communication portal

The navigation on the Colabs portal was quite difficult for the children, hence the inadequate textual information, which confused and not guided them, were deleted or replaced by icons – the Picture Communication portal becomes much more visual (user interface – 4. figure, functioning – 5. figure). There are also less tools for communication, and remain mainly those for *picture communication level* and *abstract self-expression level*.

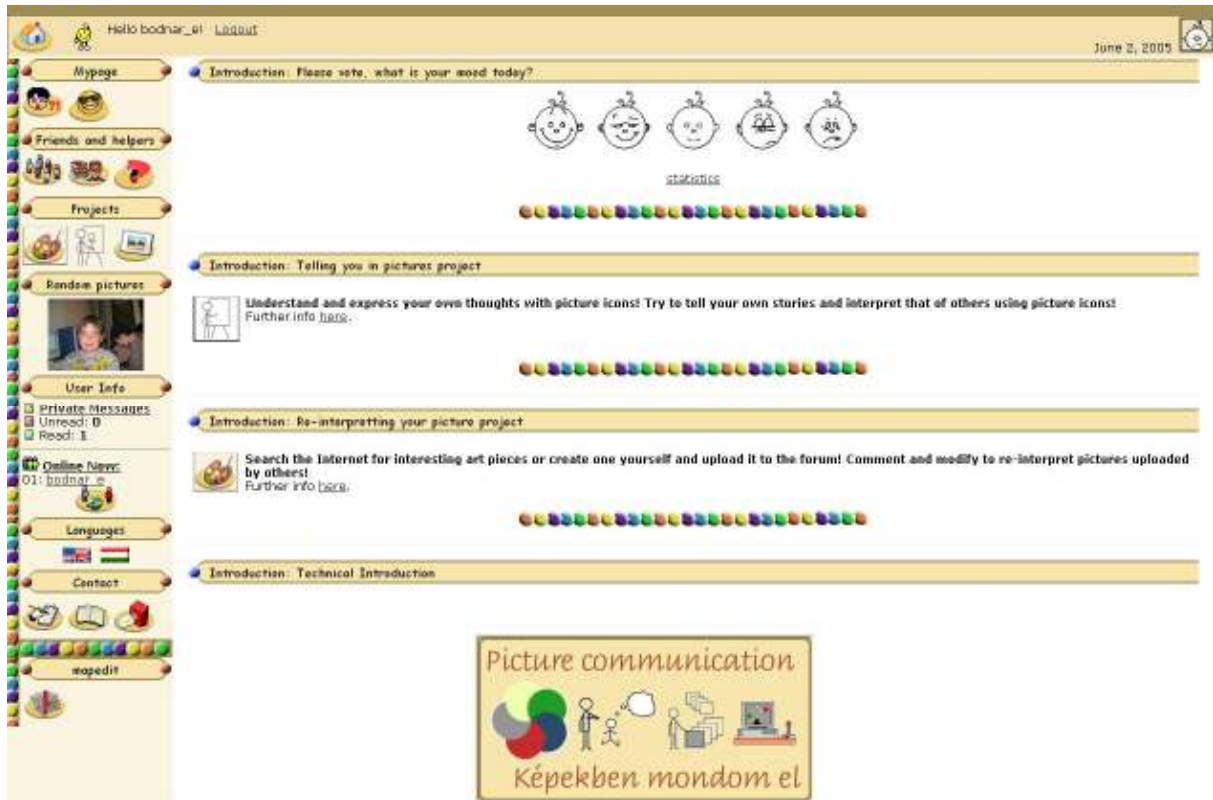


Figure 4. The Picture Communication portal

MyPage is the area, where users could change their personal settings and see only their own works uploaded into the Gallery.

In the **Friends and helpers** area user could read introductions of everyone joined to the life of the portal: children, teachers or group coordinators, helpers/mentors. There is a separate mentor area and also a help about how to use the portal.

Project area is divided into *Re-interpreting your picture*, *Telling you in pictures* and *Gallery* are. In the first and second areas, users can find textual orientation about the activities, which is different for children and teachers, and microworlds for facilitate children's creativity and self-expression during the activities. The *Gallery* area is for uploading works and commenting other's works.

In **Random pictures** area random picture from the Gallery is appearing.

The **Mood today** area is very interesting for children. Every day they can choose one between the five faces, which is represents the best they current mood. This area was built in order to facilitate the forming of the community.

6. Research questions

What kind of activities could emerge in such international circumstances?
 What skills and abilities of individuals are improving during the activities?
 What is the best way of encouragement of communication through pictures?

All of the activities – internal messaging, instant messaging, comments of works in the Gallery, voting, chat-sessions - on the portal are logged, in order to analyze them after we will have appropriate theories and strategies (Turcsányi-Szabó, Bodnár, 2004).

During the experiment, we expect significant growth of participant's English vocabulary, visual culture ability and creativity, and non-significant decline of motivation. For measuring children's qualities mentioned before, the following instruments were used online:

1) **Words Test**

Instrument containing picture elements from Picture Encyclopaedia with appropriate and inadequate English words.

2) **Visual Culture Test**

Instrument contains 21 tasks - 18 from Visual Culture worksheets for 6. class, made by János Zele, available at Kiss Árpád OKSZI Measuring Center and 3 were made by Pattantyús-Ábrahám Sándorné, on the basis of Magyar Sándor: Pictogram handbook (1991).

3) **Creativity Test**

Instrument contains 2 tasks from well-known Torrance Tests of Creative Thinking (TTCT).

4) **Cooperation and Acquirement Motivation**

This questionnaire is made by Józsa Krisztián, PhD.

Similar, live experiment for children (Eurologo 2003 workshop) has been already designed by our group. The highly positive experiences from this activity encouraged us to continue the development of this virtual world of picture communication.

Additionally, our intention is to try it out in the form of an interactive event, at Computer Supported Collaborative Learning Conference, 2005, Taiwan.

Presentation will also contain results from the current experiment.

References

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