The KHouse Program Revisited: Building New Competencies in the KHouse Community

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Abstract - **The KHouse Program tries to promote the democratization of and access to the new information and communication technologies (ICT). It is focused on people from less privileged communities, who do not have computer and Internet access at home or at school. Students and teachers from public schools, and senior citizens also participate in the Program. The main objectives are: to work for poverty reduction and equitable growth by promoting local skills against the social, educational and digital divide; to bring children, teenagers and elders into the new ICT resources, as our world are dominated by ideas and products from them; to encourage students to change their attitudes by making them wish for something better for their future; to decrease the social and technological inequality by contributing towards a decrease in unemployment, violence and social apartheid; to promote self-esteem and social justice in this less fortunate population segment; to establish and link networks between young people, elders and teachers in order to promote capacity building, awareness raising and mutual understanding of the problems and imbalances linked to their realities, as well as to seek solutions to overcome them; to teach and dignify values such as citizenship, ethics and solidarity.**

Index Terms – Capacity building, digital inclusion, ICT, promoting local skills, social justice.

1. INTRODUCTION

The KHouse Program (http://venus.rdc.puc-rio.br/kids/kidlink/khouse) is administrated by the KBr/Kidlink Research Group (http://venus.rdc.puc-rio.br/kids/kidlink). Since November 1993 it has been operating in the country with the main objective of reducing social inequalities and increasing inclusion into the technological field, for less fortunate children and teenagers, as well as senior citizens [1].

In order to benefit those who do not have computers at home or at school, KHouse is a "house with open doors", anytime, anywhere, for everybody. Because it is only through education and qualified skills that people can change their future for the better. A general public with a broad understanding of ICT contents and methods can have the force to shape their own choices, as it is necessary intellectual tools to be able to judge arguments on a variety of issues and thus resist any kind of discrimination and/or exclusion.

The KHouse Program has four models, which vary according to the age, interests and socio-cultural profile of the target public: Kids [2], Open [3], Family [4] and Professional [5]. There are currently 45 branches spread in the states of Rio de Janeiro, São Paulo, and Ceará (the last one in the poor region of Northeast), benefiting approximately 3,000 children and youth and 240 senior citizens.

The KHouse PUC-Rio (Catholic University of Rio de Janeiro) model also benefits its employees and their relatives, privileging those who have the lowest salaries. As the KHouse Program is a subdivision of Kidlink Project, which is represented in more than 170 countries that use their services, the number of people benefited from both projects is uncountable.

After 14 years and 45 units spread in Brazil we can affirm that without the aid of the team involved in the Program, since the very beginning, the target communities might never have had the opportunity of dealing with ICT, since they were excluded not only from the civil society, but also from the Information Society.
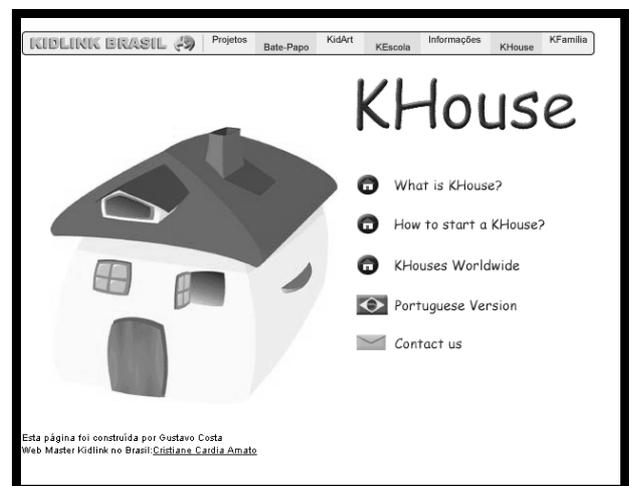

FIGURE 1
KHOUSE'S HOMEPAGE

Coimbra, Portugal　　　　　　　　　　　　　　　　　　　　　　　　　　**September 3 – 7, 2007**
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2. OBJECTIVES

The lack of adequate public policies aimed at the social/economical segment of the population less privileged, is well known in Brazil. Thus, the KHouse Program has the crucial objective of reducing social apartheid, and the target public is the people who have been forgotten by the government and politicians for years.

To make these people participate in a so relevant social project, while at the same time being introduced to the Information Society, it is fundamental to promote not only self-esteem, but also social justice. Because of this, the Program has, as its main goal, to democratize access to information and educational content, by promoting not only the teachers skills in order to have them working together with their students, but also the technological qualifications of the students to try to help them in the work market.

In this panorama, young people from less privileged communities have the opportunity to have a fundamental complement to the knowledge received through the traditional school, as in the Program they learn how to deal with ICT, research, work in groups, respect each other, live together and share experiences with other young people from all over Brazil, and even abroad, everything in a simple "click".

As is well known, knowledge and skills in ICT are indispensable for most of our actions and decisions as workers, voters or consumers. Meaningful and independent participation in modern democracies presumes an ability to deal with ICT, as they are a product that all citizens, regardless of their occupational needs, should be acquainted with. So, the KHouse Program's team tries hard to raise the awareness of these issues and discuss the possibilities of helping students to overcome their difficulties.

They also intend to form critical and ethical citizens, conscious of the importance of social responsibility and citizenship, as it is through these two mechanisms that community and volunteer work can promote a better life for those who are involved in this enterprise.

Besides promoting self-esteem and social justice, the Program tries to teach and dignify values such as citizenship, ethics and solidarity. It additionally gives the means for students to join the work market, thereby reducing the rates of unemployment and violence.

More than ever before, the Program has been working to promote viable social and educational development, in accordance with UN's Resolution adopted on 20 December 2002, when 2005-2015 was chosen as the "Decade for Education", with the objective of sustainable development, with UNESCO being the supporting organization. The Program initiative has been improving people's well-being and livelihoods, and contributing to economic and social development. The Program promotes the rapid application and dissemination of an innovation that can benefit a large number of people.

3. METHDOLOGY

The KHouse/PUC-Rio Model is a research and development unit which is responsible for developing educational material and transferring it together with pedagogical orientation to all KHouses while taking into consideration their respective characteristics and regional aspects. New strategies and basic common procedures have been developed to introduce the "technologically illiterate" people to computers and, in particular, to the benefits of the Internet, independently of the local realities and the cultural diversity of the learners.

A period of familiarization/adaptation is necessary for the students during their first contact with the computer (hardware and software), in order to know all the available resources. Usually this adaptation is very fast since their curiosity and "hunger for knowledge" is enormous.

After the initial phase, the students are introduced to the Internet, and discover - through guided navigation - the large amount of information and entertainment provided by the WEB. At the same time, they participate in projects and the creation of a student's newspaper, among other activities recommended during this phase of discovering - aiming at the consolidation of their knowledge about the technological resources in a very entertaining way (suitable games in order to improve typing or activities such as importing, maximizing and minimizing pictures, changing text color, etc.).

Throughout the process it is possible to observe the difference of improvement of the groups, as soon as their writing skills get better and they become proud to share their free-of-mistake texts with a bigger audience.

The introduction to the Internet and the communication via e-mail takes place next. In the beginning, during the first years of the program, it took place through the use of a private list, available at the server located at PUC-Rio (khousekbr@mimas.rdc.puc-rio.br). Through it the participants can share their difficulties in writing. This gives them confidence and preparation to later communicate with new partners – in an entirely new dimension – in the lists of Kidlink (e.g. kidcafe-portuguese@listserv.nodak.edu). However, the absence of the habit of sending/receiving letters or even having access to any other form or written communication such as papers and magazines has shown the necessity of a "preparation phase", in which concrete examples are developed ("real letters", use of stamps, etc.) before turning to mail exchange.

During the following phase, email exchange is stimulated as part of short term projects developed exclusively among KHouses. The Program themes try to explore the participants' creativity and the peculiarities of their living environments. Actually, the methodology proposal is based in Project Activities Theory and in collaborative action.

The participation in the activities does not require complex pre-requisites since they are mostly based on the individuals' life experience and imagination. Through the exchange of experiences among groups new attitudes also develop in the various groups. They become interested, for instance, in the geographical location of other cities and states, in the eating habits of different regions and many other extra-curricular issues. All that contributes to a process of independent knowledge construction based on individual interests.

4. THE KIDS MODEL

Working with children is a very rich activity, in which one is always learning something, but working with poor children is something more, because it teaches us much more and makes us discover many things in ourselves.

The reality of their lives is completely different from ours and, consequently, we must be very perceptive in order to convey what really "makes sense" to them.

The constructivist approach [6] provides two major tools for working with poor children: (a) it allows us to know each child better, as the child shows his/her cognitive style, interests and necessities; (b) it does not provide answered questions, forcing therefore the children to think.- breaking the passive routine to which they are involved. Perhaps the constructivist style made his experience viable through peer collaboration among children on the Internet: it may contribute to a more positive attitude of poor children towards knowledge and life.

The observations compiled from the work with poor children in the KHouse Program, using the Internet to enrich their learning environment, has led to the following set of observations: (a) children see the computer as a working tool and, sometimes, as an escape mechanism to help forgetting their real life styles; (b) the possibility of each child to be known, to have friends, to communicate with others, to know that the world is much bigger than the environment they live in, and to get to know themselves from the emotional and intellectual points of view may be part of the solution to the very complex problem of children abandoned by the society.

5. THE KFAMILY MODEL

The KFamily, specifically for senior citizens, follows two theoretical concepts: "Dynamic Community for Learning" and "Interconnected Family", which ones affirm that the Internet has developed a new way of learning, more opened and not totally driven and controlled, what can promote the creation of dynamic communities for learning.

In this "laboratory of learning" groups of people interact, organize and support themselves mutually, with a specific objective, in order to complete or research a task collaboratively [7]. Thus, all the participants involved can exchange information and learn from each other, without distinction of age or generations. Another objective is to rescue the self-esteem and the abilities of the senior citizens who, many times, are neglected by the public sector, and even by their own families.

As it is in this specific age that people need more care and attention, the KFamily fights against any type of discrimination, and try to help them to fully participate not only in the civil society, but also in the Information Society.

The methodology used by the multidisciplinary team of the Program was developed to avoid the "technophobia" and the lake of interest, through the interaction between young people that are the volunteers that will teach the oldest ones, promoting, in this way, a kind of "virtual family".

6. THE OPEN MODEL

In this phase, the intention is to provide technological access to students who have left the Kids Model, and who, for economical reasons, do not have the opportunity to practice and improve the knowledge acquired during the previous period of "technological literacy" training at KHouse Kids.

The Open Model functions as a public library, without payment, mainly for those who want to use the computer and the Internet for school work or for other activities related to their needs and desires. In this phase the students are supervised only by the Program's team and not by their teachers.

7. THE PROFESSIONAL MODEL

This model was created through a partnership between the KHouse coordination and the chancellor of CEFET (Federal Center of Technological Education) in Fortaleza, capital of Ceará State. From that union there emerged a project to promote local skills of young people that resulted in the KHouse Professional Model (KP) aiming specifically towards helping them in the work market. In this course the students learn how to fix and maintain computers, networks, software and hardware. For this training the computers from KHouses are used, which promotes not only the students practical improvement, but also a low price for equipment maintenance.

The methodology used in the KP offers to the students a course which develops technical abilities through a pedagogical point of view. The educational theories used and the activities suggested are based on projects and the objective is to work with technical knowledge by building concepts together with the students, in order to make them multipliers of this specific knowledge, inside their social and educational context. The KP is a professional course because it presents a structure where the contents taught are fundamentally focused on the technical and professional literacy in informatics field that the students will need as workers.

So, the methodology used was especially designed to develop the abilities and competences of the students and to improve the capacity building, by following the constructivist theories of Piaget [6].

The activities suggested try to be in accordance with the reality of the students, which ones, together with their teachers, build and exchange the knowledge.

Besides working to diminish the educational abysm between who has access to the ICT and who has not, the KP offers contents that are focused on the technological field and the Informatics, with the main purpose of inserting the young people into the work market.

This professional education promotes not only the development of many skills for finding the first job, but also the awareness of young citizens to fully and creatively act and transform their lives for the better.

8. RESULTS

The main form of interaction is through the Internet, but the students from KHouse Program also learn how to deal with ICT from the very beginning, and those from KHouse

Professional go towards, learning how to fix and maintain computers, networks, software and hardware.

Because there are no "ready answers", the Program enables the students to think and break the passive routines in which they are usually entrenched. The proposal is not to substitute the school teacher, although sometimes there is the need for parallel and complementary work, because the majority of children from KHouse lack literacy in writing and/or textual comprehension.

On the other hand, the fact that children have the opportunity of dealing with computers makes them consider themselves "very important people", and makes them feel more integrated and participant in society, as real citizens. More importantly is the hope of a better and promising future, where the desire to study in a university and the possibility of being a "doctor" one day begins to appear in the children's dreams.

The Program has been working for less fortunate children, youth and elders, accompanied by their teachers, who learn together with their students. The main goal has been to promote local skills with practical tools, by improving the students and teachers' self-confidence and competence inside the community. The Program methodology can also encourage a change in attitude and even in aspirations toward the future, as it fights against social and digital division. It aims to inspire every person involved to engage in the community's development as a whole, facilitating the growth and integration of the group, but always with respect and confidence, contributing towards the construction of a fairer and more equal society.

In order to promote the use of digital technology for educational and cultural development by professionals, children, youth and elders, the multidisciplinary team from KHouse Program has been creating and developing projects and exercises that, when completed, are sent to the site electronically. So, the students can see their own work exposed and this fact arise the desire of having better ones being exposed and exchanged among the community involved.

Also the professionals have been able to see more clearly the weak points of their students and, by consequence, have helped them to overcome their difficulties. In addition, the multidisciplinary team have been improving and/or adapting the projects according to the students' feedback and needs.

The results are measured in both semesters through reports written by teachers and/or principals. These reports show the improvement of students' performance, punctuality and assiduity. Also the KHouses have been constantly evaluated, because it used to be a supported project from GT - Management Committee for Internet in Brazil (PNUD) during the years 1996/1997, and it was also supported by Prior Program for Informatics from Science and Technology Ministry (MCT/CNPq) during the year 1998, both agencies that are rigorous about checking and evaluating projects they support. Nowadays, the KHouse Program is cited in the *Green Book from the Information Society* from the Technology and Science Ministry, launched in September 2000, as a very successful example of what is being done to promote democratization of and access to the ICT in the Educational area.

9. TRANSFERABILITY

The KHouse Program has currently 45 branches spread around the country in the states of Rio de Janeiro, São Paulo, and Ceará, benefiting approximately 3,000 children teenagers, and 240 senior citizens.

The Program can be implanted in many schools, universities, museums, libraries, among others. It is a work of great relevance, social responsibility and quick implementation.

We suggest a room equipped with 10 computers linked together in a network which is connected to the Internet, in order to attend at least 2 groups of 20 students, accompanied by their teachers, with 2 classes per week, lasting 2 hours, with the supervision of 3 volunteer professionals chosen by the host institution, in charge of the pedagogic, psychosocial and technological support.

10. THE MAJOR BARRIERS

Only people who live in a country from Latin America, full of huge discrepancies, social injustice and inequalities can fully and deeply understand the importance and magnitude of putting children, youth and elders from less privileged communities in front of a computer screen. ICT is so unreachable for them, that in their minds the possibility of dealing with this equipment is almost a miracle.

These people are so careless that the fact of having this opportunity and mainly this attention can change their attitudes towards his aspirations concerned to individual, social and professional life.

Brazil is a rich country with poor citizens, and because of this, people from civil society have to help and support projects and ideas like this. This mentality, fortunately, has been growing day after day, but, as the country has so many other infrastructural problems to solve, the Third Sector's support has not been sufficient to cover the huge region in the country and the dense population that needs care and attention.

In order to attend to the needs of people from many regions of Brazil, mainly from the Northeast, it is necessary for our Program to invest in equipment, materials and teacher training. Because of this, we are also looking for sponsors to support our work.

So, presenting the KHouse Program in congresses and awards can allow the pedagogic team to show its significance and magnitude, make it well known abroad, and even inspire others to do a similar work.

For this purpose we need: to pay tickets and hotel expenses for the KHouse team and coordinators, on trips to open, form and teach the new teams, and also to accompany "in loco" the project and the specific needs from each branch per region; the acquisition of original software; to create and maintain the home pages (programmers and designers' salaries); to renew the KHouses that have obsolete equipment; to buy, fix and maintain equipment for new branches; to promote teachers skills through periodic training and workshops; to acquire uniforms.

11. OVERCOMING THE BARRIERS

The director of KHouse Program has been working untiringly to keep it alive. She participates regularly in conferences, seminars and competitions in order to make the Program better known, spread her vision, find sponsors and raise money, as it is a non-profit kind of work.

She believes that education is the key to guarantee and validate citizenship and human rights and also reinforce national and even international cooperation for an educational policy and for an acceptable and sustainable development. Educating the population involves giving people means that will allow them a viable and dignified life. Education, in all levels and in all forms, must help people of every age to have fuller lives and know their roles in this Third Millennium.

Another interesting subject refers to a unique situation that happens in KBr/Kidlink Research Group in Brazil, when compared with other Kidlink communities all over the world: in other countries children get connected to the Internet mostly from their homes and parents/adults become volunteers to perform Kidlink activities in order to work together with their children.

This, in one hand, reflects the unfortunate fact that schools in Brazil are late in getting connected to the Internet. On the other hand, it has been allowing Kidlink in Brazil to skip stages to reach what Papert [8] calls "the connected family".

According to his point of view, parents/adults must recognize the need for constructing new forms of relationship with their children, and must look to the computer as a way of reaching such objective, instead of seeing it as an obstacle to the union of the family/community. Parents/adults must worry less about what their children are doing with the computer, and spend more time trying to find common interests or projects to share with them. The idea consists of using the natural enthusiasm of children for computers as a basis for the creation of a "family learning culture". The concept of "family learning culture" reflects the way the family thinks about learning: beliefs, preferred activities and traditions associated with the learning process.

Watching children working with computers may lead parents to respect them for what they are able to learn Experiences on learning with computers allows the family/community to become more aware of the notion of family learning culture and offers a chance to family members to work in order to improve it. As the learning culture in the family becomes clear and conscious, it influences the kind of experiences the family gets involved with.

The kids may be able to learn how to learn from experienced people and it can raise hopes about their futures. On the other hand, the elders will raise their self esteem while giving their contribution to the reduction of social inequalities in Brazil.

12. FUTURE PLANS

Our main plan is not only to maintain the Program healthy and alive, but also to spread it around, having more KHouse unities in Brazil, and even abroad.

Also we would like to reinforce our KHouse Professional Model commitment, by offering the opportunity of a dignified life for people who have been excluded from the civil society and, by consequence, from the information society.

13. CONCLUSION

The ability of dealing with the ICT is a new and necessary prerequisite for the teachers´ practice, in order to best act as an autonomous and critical citizens and workers in the Third Millennium, and to incentive their students to do so.

Having in mind the huge transformations of the global and virtual world, the KHouse Program saw the necessity of fighting against digital divide, mainly for people from the less privileged segments. The main objective has been to give them a major technical support, with classes that show the importance of using the ICT, mainly the computer and the Internet, in many areas of their lives.

Autonomy has been the key word [9], because trough it the students can develop the necessary procedures to the resolution of their own problems, and also are stimulated to think about how, through the cooperative work, they can build and enrich their knowledge. In this way, a contribution is given to the formation of the identity of these students, who should be autonomous citizens of their own learning process.

In this new panorama, the students have the opportunity of being multipliers of the new technologies, having as support, the KHouse Program [10] methodology transmitted by its multidisciplinary team.

Thus, the ICT applied to education can have new and uncountable usages, such as stimulating and developing the curiosity, the pleasure of researching, the cooperative work and the critical and reflective awareness in order to form participative citizens to act and, mainly, to reformulate the new Information Society of the Third Millennium for a more democratic and fairer one.

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