

Teachers Virtual Learning Real Experience

**Lessons Learned
and Achievements**

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Comunidades Virtuales de
Aprendizaje Colectivo

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- Information technologies in education are becoming more common every day. The great advantages, efficiencies, opportunities and empowering that the use of computers, software, networks, digital libraries and Internet access bring into the education process and its management motivate a growing part of the education community to embark in technological projects and awaken the interest of the rest.
- But many of these initiatives, in part because of the changing nature and novelty of technology, are defined in a rush, with acquired enthusiasm, without the proper and solid planning that any educational activity requires, therefore not assuring a better quality of education and end up with results quite below the initial expectations.
- Throughout the education sector we currently find IT technicians developing education systems and applications and teachers and education professionals using technological tools to develop materials and try to enhance their classes.
- Both, IT technicians and education professionals, improvise, innovate and try to give their very best to produce beneficial projects, but very often the former lack the pedagogical foundation while the first lack technological knowledge and both lack the abilities and vision to design and implement the tools as part of a solid system that takes advantage of the technological advantages and responds to the educational needs, taking into consideration pedagogical, management and strategic planning aspects.

Motivation



- To address this issue, the Ministry of Higher Education, Science and Technology (SEESCyT) set out to develop a website, regular conferences and workshops and on-line course through which it distributes and provides content, tools, examples, support, motivation and orientation in the proper use of IT's in Education, as well as the means and tools to communicate and exchange experiences on this matter.
- The virtual and distant learning course was defined to provide both educators and IT professionals and technicians with a sound base and reference material to consult when putting together and developing projects that use IT in Education.
 - It helps educators to better understand technology and the achievements they can dream of.
 - It helps IT technicians to better understand pedagogy.
 - Strengthens the capacity of both to design, formulate, implement, execute and supervise, IT on Education projects.
- The idea of a virtual workshop came to be after our participation in the Enlaces workshop sponsored by the OAS' UDSE and their efforts to maintain the relation and collaboration among its participants towards the development of IT projects that could help improve the quality and equity of education in our countries. All of the participants returned from the workshop highly motivated and eager to work together in such initiatives, so when the idea of a virtual workshop was mentioned, they all supported it with enthusiasm and offered to be local coordinators of the workshop.

Motivation (2)



Motivation

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- **Content Presentation and Distribution:**
 - Format:
 - Digital text documents.
 - Digital presentations.
 - Recommended web links.
 - Via:
 - Posted on the website.
 - Sent (or notified) by e-mail.
- **Asynchronous Participation:**
 - Mailing lists.
 - Virtual forums.
 - E-mail messages.
- **Synchronous Participation:**
 - Chat rooms.
 - Instant messaging.
- **Interaction with Local Coordinators:**
 - Each country has a local coordinator (most from the Chile workshop).
 - They are available via e-mail, chat rooms, mailing lists, instant messaging and phone locally.
 - Many coordinate physical meetings in their countries and cities.
- **Goals and Skills:**
 - Expected goals are mentioned and explained, both expected products and expected achievements.
 - Skills to be developed by participants are explained and detailed so they what they will achieve and how they will benefit from the program.
- **Working and Learning Groups:**
 - Groups are organized by country, education level and areas and projects.
 - This allows participants to better interact and learn from each other while following and exploring common goals.
 - Groups have their own mailing lists, forums and homepages and areas within the course website.
 - No coordinators are assigned within groups, except in national groups, but in every group there are participants more active than others that motivate their participation.
 - Those active participants receive special rights that allow them to directly publish information in the group's homepage and moderate the forum and mailing list.
- **Horizontal Participation:**
 - Every aspect of the course is presented in advance to participants allowing them to comment, discuss and contribute to adequate them.
 - This includes the methodology, pedagogy, contents, sections, etc.
- **Evaluation:**
 - Every participant performs its own evaluation based on his own selection of criterias and posts it in the forums for others to comment it.
 - Local coordinators also post a national evaluation for everyone to comment.
 - General coordinators post a global evaluation with statistics for everyone to see and comment.

Methodology



- **Roles and responsibilities:**
 - Students responsibilities are posted on the website.
 - Coordinators functions are posted on the website.
- **Coordinating activities:**
 - A calendar is posted on the website.
 - Activities for each group are posted in their forum and their website and sent to their mailing list.
- **The Program:**
 - The program consists of 5 stages and is presented in 3 versions:
 - A simple one that explains the goals of each stage.
 - A detailed one with the modules, content and abilities to work on every week.
 - A detailed program with contents, with links to the actual course contents as they are made available on a week by week basis.
 - The program is flexible and its topics are enhanced, extended, modified upon requests and suggestions of participants.
 - Topics are expected to be discussed during one week each, but usually a decision is made to extend the discussions and work on the topic for additional weeks in order to achieve better results.
- **Course Project:**
 - In the first classes, participants have to define a project to develop throughout the course, not just present it at the end.
 - Examples and suggestions of various types of projects are presented:
 - Digital Course.
 - IT Strategy in Education, regarding either pedagogics or management (for an institution, a community, a class, a curricula, a department, etc.).
 - Virtual Community.
 - Interaction, exchange and joint work.
 - Elements and steps for putting together a project are presented.
 - The participants are free to define and choose their project, the only conditions are that:
 - it takes into consideration the conditions, needs and expectations of the actors and parties involved.
 - is defined to produce a significant impact in their immediate environment.
 - Projects can be developed individually or in groups.
 - Participants post their projects (starting with the draft) on the forums for other participants to comment, join or coordinate their own project with it, enhance it, etc.



Logistics

- At the beginning of every week:
 - Content (a text article, a graphic or diagram, a graphic presentation, etc.) is uploaded to the server.
 - A “This week’s activities” article is posted on the website with:
 - links to the new content.
 - link to the forum where it should be discussed.
 - orientation on what to look for in the content, questions to be made and answered and suggestions to translate the content to the participant’s context and environment.
 - An e-mail message is sent to all participants with the activities and links to the new content, related forum and content.
- Throughout the week:
 - Topics are discussed in the forums, chat rooms, mailing lists and in person by local groups.
 - Coordinators participate horizontally with other participants in the discussions.
- Every piece of content is presented with links to:
 - one or more discussion forums to discuss and enhance its different topics,
 - additional content (usually external links to other websites),
 - other content already mentioned in the program.
- An effort is made to present to content in different formats and media:
 - Text document.
 - Graphic presentation.
 - Diagrams.
 - Digital Audios.
 - Digital Videos.
 - Web pages.
- Several standard formats are used to ensure everyone can use the materials:
 - PDF documents.
 - Web pages (HTML).
 - MS Office documents.
 - Open Office documents.
 - GIF/JPG/PNG graphics.
 - Flash and shockwave presentations (.swf)
 - Executable files for PC platform.

Methodology (3)



Goals, Skills and Products

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Goals and Skills

- **Course Objectives:**
 - The main goal is to contribute and start to close the existing gap between IT technicians and professionals, educators, education managers in order to promote the development of IT strategies and pedagogical-technological models pertinent and viable that strengthen the educational process and help achieve better learning and formation of students.
 - Provide teachers and IT technicians and professionals with a solid base and reference material to consult when developing IT strategies and projects in education.
 - Help educators to better understand technology and IT technicians to better understand pedagogy, strengthening the ability of both to work together to design, plan, implement, supervise and execute IT projects and strategies in education.
- **Skills and Goals to be achieved by participants:**
 - Knowledge of concepts related to IT.
 - Knowledge of recent findings and trends in education.
 - Development of a broader vision of the use of IT in education and the ability to build a pedagogical-technological model.
 - Knowledge of aspects, means and tools to consider and with which to build virtual learning environments and implementations of IT in education to improve its quality.
 - Free apps.
 - Commercial apps.
 - Ability to define IT in education strategies for its country, institution, career, education area, course or subject.
 - Knowledge of relevant experiences, resources and websites regarding Education in Latin America.
 - Exchange experiences with educators from all over Latin America, having at hand a varied portfolio with strategies, initiatives, activities to develop in the classroom, school, community and at home with other teachers and students.



- Five products and specific benefits for the Latin American education community are expected:
 - 1. Teachers Training Material**

All of the content developed by and for the participants ends up being public domain so its reproduced, distributed and used by educators, researchers and IT professionals in the education field.
 - 2. Latin American Education Virtual Community**

A virtual community articulated, enabled and empowered to produce a positive and significant impact in our countries education. That is to be achieved by:
 1. Educating and enabling educators in the catalizing use of IT in Education.
 2. Providing them with a mean to interact, communicate, participate and the tools to build content, projects and activities that are pertinent to the needs and interests of studtens, educators, institutions, society and curricula of our countries.
 - 3. Educational Latin American Content and Projects**

Participants will produce digital and interactive didactic content, IT in education projects for their classroom, curricula, institution and/or country and will have the tools to enable their own workgroups in their country to customize or further develop such projects and contents.
 - 4. Diagnostics Latin America's Education Reality, IT's in Education viability, limitations and potentials**

This diagnose will be built throughout the course through specific questions and evaluations and open dialogue with its participants.
 - 5. IT in Education Strategies viable for Latin America**

Based on the strategies suggested and built throughout the course by its participants and enhanced and completed by the coordinators with the participation of all parties involved.



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Results: Participation and Achievements

Lessons Learned



- Surprisingly almost 2,000 people from all over America enrolled in the course.
- People learned of the course by word of voice, the help of the Chile workshop and simple links placed on the websites of www.seesyct.gov.do, www.educar.org and www.civila.com
- Countries Participation:
 - Prompted by the motivation of their country's Programa Huascarán 400 educators from Peru.
 - Similarly, motivated by their local Profesor Conectado program and Programa de Informática Educativa, over 350 teachers from the Dominican Republic enrolled.
 - More than 100 teachers from México and Argentina each also joined us.
 - Other countries with significant participation (over 50 people) are: Bolivia, Colombia, Chile, Paraguay, Ecuador.
- Profile:
 - Most are teachers, from all levels (initial, basic, secondary, tertiary) and areas (science, social, artistic, special, etc.) of education.
 - Some are principals, other are students, psychologists, IT technicians.
 - Some are in charge of computer labs.
 - Auxiliary personnel and in charge of handling media (administrators of media centers, teachers and support personnel from TV centers, educational radio and TV) have also enrolled.
- A significant part found their participation a valuable and positive experience, although many had difficulties accessing the technology and using the tools, which most overcame with practice and the help of fellow participants.
- Their auto evaluation suggests that there is a need for this kind of initiatives in education and that they would be enthusiastically supported by educators throughout the hemisphere.
- Higher education educators have not participated as actively as those from other levels and when they have, most have done it around topics and matters not related to higher education (technology, educators limitations) or related in part (like institutional projects, labor competencies, etc.).

Participation



Latin American Education Virtual Community

- Statistics:
 - 517 participants have registered in the virtual forum system.
 - 328 participants have made 4035 posts regarding 603 subjects in 55 forums.
- Some participants do not participate directly in the forums, but they do it through work and study groups whose results are posted by a member of the group.
- Since registration is not required, many participants limit themselves to navigating the forums and reading the discussions.
- Participants interact and relate to each other in a professional and personal matter through the national and thematic forums, chat rooms, instant messaging, e-mail and the joint or coordinated development of course projects. Professional and personal relations have developed among many participants.
- Many participants have been very active and motivate other participants by maintaining the forums active with their posts and updating the national and thematic sections.
- Lots of content, experiences, topics have been introduced, shared and explored by the initiative of participants.

Achieving the Goals



Diagnose of IT in Education in Latin America

- Special forums have been set up and participants have built together a list of needs, limitations, opportunities and potentialities of the following actors:
 - Educators, Students, Educational Institutions, Parents.
- These will be extended to include:
 - communities, ministries of education, education programs, curricula, methodology, evaluation systems, support and development institutions (NGO's, international aid organizations, etc.), support and complementary services.

Formulation of IT Projects and Strategies that are pertinent, viable and have a significant impact in our environment

- Over a 100 IT on Education projects are being formulated and developed by work groups which transcend their geographical location and time zones, including the following area:
 - Teacher education, digital courses, IT strategies, development of read/write skills, digital science content and activities, digital content and digital libraries of local and ethnic content, use and management of digital media and libraries, student interaction, exchange and joint activities among schools.
- Most freely follow the methodology and steps suggested in the course.

Achieving the Goals (2)



Development of Didactic Material

- The training material developed for the course has been enhanced by the comments, suggestions and extensions by the participants, remaining freely available in the Internet for the use of all interested.
- Detailed and organized revisions of the content and materials are planned and made available throughout the course whenever going from one of the five stages to the other.
- Many of the course projects being developed by the participants consist in digital courses, content and didactic material to be used in schools, as well as strategies to improve the quality of education with IT's.

IT in Education strategies that are pertinent and viable for Latin America

- From the diagnose, the participants projects, the discussion of IT strategies for development, pedagogical-technological models, maps of actors and the analysis of the actors profiles, needs, potentialities, relations, we are collectively and participatively building the elements that will enable the formulation of IT in Education strategies that answer the needs, realities and multiple contexts of Latin America, both in a micro and a macro level.

Achieving the Goals (3)



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Lessons Learned



- Many educators are not used to read, explore or navigate on their own.
- Educators get used to read, explore, navigate on their own if properly motivated.
- It is not enough to list activities to complete, they have to be motivated by the horizontal participation of coordinators.
 - Although there has been a fair level of active participation, most of it has been reactive and not proactive.
 - Best participations and comments do not generate reaction and answers.
- Distant Learning and Virtual Education strengthens the role of the educator.
- Distant Learning and Virtual Education makes it easier to achieve personalized education without sacrificing collective learning.
- Distant Learning and Virtual Education can require much more time and effort than presential education.
- Active Participation, Socialization and Collective Construction of Knowledge can be much higher than in presential education.
- The paradigm of the importance of few students for each teacher remains valid in Virtual Education and Virtual Learning.

Lessons Learned



Many educators are not used to read, explore or navigate on their own

- As a consequence of years of conductist, vertical and knowledge transmission pedagogical models, a significant amount of participants, although being educators, motivated and interested, did not read the information and instructions posted on the web page, nor they took their time to navigate it and explore in detail and calmly.
- Most were expecting a pedagogical model where every little aspect and activity was explained step by step and their every move was guided and directed by the coordinators.
- Instructions, guidelines, answers to frequently asked questions sections are continually ignored by the educators, who proceed to ask for immediate assistance from the coordinators without taking their time to previously consult the clearly visible options and instructions available on a quick browse of the web page.
- Our response to these findings was to:
 - Redesign the interface so general info, instructions and sections of the course are always available to participants.
 - Set up a class program with links to its materials and activities to help participants navigate and locate themselves in the program as well as to ease catching up and staying up to date with the program.
 - We detailed very clearly on a debate open to comments and suggestions, the pedagogical-technological model of the course, the role of coordinators and the participants responsibilities.

Lessons Learned (1)



Educators get used to read, explore or navigate on their own if properly motivated

- Once familiar with the course's pedagogical-technological model, the virtual learning environment and upon discovering abundant material and topics of their interest, participants proceed to explore, browse the content and different areas of the on-line course and enhance it with their own insight, experiences and opinion.
- We try at all times not to create roads without exits, both thematically and visually, so that when participants browse any topic or content, they always find an invitation to participate, comment and continue to explore related topics.
- The horizontal participation of coordinators and other participants acting as dynamizer and catalyzer elements turned out to be very important to motivate participants, because it allowed them to better relate and identify themselves with the program, its content and the people involved.
- Participants highly appreciated the detailed explanation of the pedagogical-model and were very happy to see traditional names such as Freire, Freinet, Montessori, Decroly, Piaget, Bruner, Vygotsky and Dewey and traditional topics as styles of learning and skills development related to the use of technology in an explicit way.

Lessons Learned (2)



It is not enough to list activities to complete, goals to achieve and topics to discuss

- When we asked participants to review and comment the course program to enhance it and customise it to their own interest, needs and make it pertinent for each of them, none did it, although at the time we had more than 500 participants already registered.
- But when we posted several topics related to the program in the forums, participants started to make comments and suggestions and we were able to add about a dozen of unforeseen topics to the program.
- On the main forums and some thematic and national forums there is a fair amount of activity, motivated by the posting of triggering topics by coordinators, followed by interesting answers and other topics posted by other participants.
- But other forums where coordinators have not triggered motivating topics remain empty or with low levels of activities, even though their subject is pertinent to many participants.

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- On the main forums and some thematic and national forums there is a fair amount of activity, motivated by the posting of triggering topics by coordinators, followed by interesting answers and other topics posted by other participants.
- But other forums where coordinators have not triggered motivating topics remain empty or with low levels of activities, even though their subject is pertinent to many participants.
 - Although there has been a fair level of active participation, most of it has been reactive and not proactive.
 - Most participations happen in response to proposals and actions required by coordinators. In very few occasions participant have said "I want to learn more about this" or "we must discuss and explore that".
 - We must motivate participants to be more proactive in determining the path of the course, its program and topics, so that they really are pertinent to participants environment and particular reality.
 - Best participations and comments do not generate reaction and answers.
 - Some posts in the Forums are long, well formulated, complete, with an introduction, an excellent and organized detail of concepts and conclusions at the end.
 - Oddly, this messages very often do not generate answers and debates. Maybe because the complete they are or the effort that commenting on them implies, participants don't critically analyze them with the proper depth or are inhibited of doing so because of how elaborate they are.
 - Apparently, either the participants assume those posts as valid not because of their content but because of the way they are structured and presented, or they are too lazy to analyze them.
 - In any case, coordinators must make sure that the value of this posts is appreciated and motivate the debate around them so participants can take real advantage of them.

Lessons Learned (4)



Distant Learning and Virtual Education strengthens the role of the educator and facilitates personalized education

- The experience demonstrated that it was in fact easier to personalize education without sacrificing collective learning.
- The educator's role grows and strengthens as a coordinator, orientator and motivator.
- Since all material is available without the teacher's intervention, he can dedicate his efforts, class time and interaction with students to:
 - better listen to and know students.
 - Empower them to enhance their particular abilities and overcome their particular limitations.

Lessons Learned (5)



Distant Learning and Virtual Education can require much more time and effort than traditional education

- The abundance of materials, the dialogic methodology, interactive collective learning communities, a higher level of participation by students and the dynamic and adaptable nature of contents and materials require from the coordinators and participants much more time than what was expected or could have been imagined.
- Through distributed reading and our participation in forums and chats, we are spending more "classroom" time than what we would be spending in a traditional class.
- Although a course material was ready before the course started, we spent over 2 entire days putting together the material and activities for each week, in order to guarantee that they are sufficiently open and "incomplete" to motivate the participation, suggest additional external materials and readings that guarantee plurality and define actions that lead to the pertinent reflexion of each participant's environment and link it to what the content states.
- As coordinator, I spend up to 10 hours a day (average of 6), reviewing, commenting participations and adecuating contents to the course environment.

Lessons Learned (6)



Active Participation, Socialization and Collective Construction of Knowledge can be much higher than in presential education.

- Everyone participates when he/she wants and can, without having to ask for permission or taking other participants time or turn (asynchronous participation), which allows for more students to participate and for each one to participate more.
- For many participants, the degree of socialization and human relations is much higher than in a traditional class.
- Since participants get to express themselves more, they listen to each other more and consequently know each other better.
- Different communication channels (e-mail, instant messaging, virtual forums, chat rooms) allow participants to get close in different aspects (professional, personal) and with more ease.
- We are sharing more experiences and knowledge about reality in other places than in a traditional class. Participants with knowledge, experiences, questions and suggestions in specific areas express and share them so other participants learn from them, comment them, complement them, reproduce them and enrich them.

Lessons Learned (7)



The paradigm of the importance of few students for each teacher remains valid in Virtual Education and Distance Learning

- It turned out that there are many participating and coordinating. Even on virtual education and distant learning, with asynchronous participation, the support of tools, the distinct role of educators, the fact that a large number of students are attended by few coordinators keeps the course from reaching its maximum potential.
- Even though we have local coordinators in each country, with motivating participants, less than 400 out of 2,000 enrolled are actively participating. It is clear that many are staying behind or are not taking advantage to the maximum and definitely are not enhancing the course with their participation.
- Those not participating, might be reading the material, exploring the page, but we are not collectively learning from their limitations, interests, questions, their response to the methodology and contents; we do not know what their environment is and they are not enhancing the course with their experience.



Thanks

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