The "four pillars" and e-education for all
Project proposal

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Abstract: The aim of this project is to take into account the wide set of possibilities of information and communication technologies, in order to promote and improve e-education for all, addressing each of the "four pillars" of education: learning to know, learning to do, learning to live together and learning to be. Main aims are to create new pedagogical strategies, tools and resources for e-Education for all, oriented towards the four pillars of education; to create "e-Educational services", especially for developing countries; to create tools and resources for teachers; to create international communities around e-Education strategies and to create knowledge building and exchange processes within the local community.

E-EDUCATION FOR ALL

UNESCO has stated "Education for All" as an essential priority. This is a double ambition: it means ensuring access to education for everyone, especially the most disadvantaged, and it also means ensuring access to quality in education for all. Improving access to and quality of education is a major challenge for preparing the future.

Education is not only a matter of content and subject transmission. A report to UNESCO by the 'Commission for Education in the XXIst century' noted that education should include four main dimensions, four "pillars": learning to know, learning to do, learning to live together, learning to be.

Information and communication technologies (ICTs) bring new tools, new concepts, new resources and new pedagogies for teaching and learning. These new possibilities must not be reduced to just the technological tools, but must take into account all dimensions of education.

The 'e-Society', the society changed by information and communication technologies, needs a new kind of education. This new kind of education, 'e-education', musty be made accessible for all, and must be a quality education for all with respect to the four pillars of education. In particular this project is to take into account that information and communication technologies do not just bring technological changes, but more importantly imply social, global and fundamental changes. It is therefore important to relate information and communication technologies to the aims of "education for all" and to the "four pillars" of education.

PROJECT AIMS

The aim of this project is to take into account the wide set of possibilities of information and communication technologies, in order to promote and improve e-Education for all, addressing each of the "four pillars" of education.

Main aims are:
-   To create new pedagogical strategies, tools and resources in order to promote e-Education for all.
-   To create pedagogical strategies oriented towards the four pillars of education: learning to know, learning to do, learning to live together, learning to be.
-   To create "e-Educational services", especially for developing countries.
-   To create tools and resources for teachers, aiming at the development of e-Education for all:
    -   Tools and resources for e-Education;

- Using e-Education for enhancing education for all;
- Using e-Education for implementing the spirit of the four pillars of education.
- To create international communities around e-Education strategies.
- To create knowledge building and exchange processes within the local community.

KEY PRINCIPLES

- Created knowledge should support the attainment of social goals, such as those stated in the UN Millennium Declaration, and should support shared understanding.
- Participation of several of the following actors: governments, UN organs and agencies, international/national/regional organisations, international professional organisations, business sector, civil society, academic institutions, and so forth.
- Projects will be directed at practical, real-world contributions to the creation of instances of e-Education, e-Health, and e-Society, especially in developing countries, and not to academic or industrial research or development. The latter may, however, be a necessary condition for the execution of the projects.
- ICT used to implement these capabilities/facilities/services must be based on the experience and finances of the sponsoring organization(s).
- ICT used to implement these capabilities/facilities/services and the businesses established to develop the local economy must recognise the lack of a strong electrical supply and of a robust communication infrastructure in many developing areas and the need to develop commerce based on dematerialized or virtual activities.
- Project execution will include a reciprocal goal of enriching the developed nations with the created knowledge of the culture, languages, and value systems of the local community.

NEEDS ADDRESSED

- Contribute to the aims of the Dakar Forum "Education for all", particularly in the field of e-Education.
- Ensure access for all to the benefits of new technologies, methods, contents, resources to improve education.

– Provide resources, methods, tools, ICT-based, in order to enhance the balance between the "four pillars" of education: learning to know, learning to do, learning to live together and learning to be.

PLAN OF ACTIVITIES

– Designing and experimenting with educational tools integrating the "four pillars" and usable in developed and developing countries.
– Producing recommendations for developing e-Education for all.
– Promoting concrete actions and experiments for "e-Education for all". For example:
  – 2 or 3 local actions in schools or universities in developing countries;
  – Distance-action through Internet about e-Education for all and the four pillars;
  – More global action at a policy-maker and decision-maker level.
– These actions should be focused on concepts such as:
  – Networking for all;
  – Enhancing collective intelligence.

EXPECTED OUTCOMES

– Concrete tools, resources, recommendations, web-resources, should be developed and produced.
– The results of the experiments, the recommendations, the tools and resources produced should be generalisable and disseminated.
– The outcomes should provide basis for "e-Educational policies". For example, following the Dakar Forum, provide an "e-Education for all Framework for Action", based on some designed and experimented actions.

CRITICAL SUCCESS FACTORS

– Real cooperation between developed and developing countries;
– Meeting the actual needs of learners and educational systems;
– Real international dimension;
– Precise contribution to the aims of the Dakar Framework for Action.

KEY MEASURES OF SUCCESS

- Local success of the first experiments;
- Possibility of generalisation and dissemination.

SCIENTIFIC RESULTS EXPECTED

- New elements in the articulation of the four pillars in Education;
- Technological, pedagogical, political, social, ethical principles and statements for developing e-Education for all.

TIMETABLE OUTLINE

1. Phase 1: Establishing principles and aims for the international project;
2. Phase 2: Describing a concrete list of possible actions to be carried out in the framework of this project;
3. Phase 3: Designing a "road-map" for each action and for the global project;
4. Phase 4: Selecting the appropriate partners and places for experiment;
5. Phase 5: Carrying out the different actions;
6. Phase 6: Gathering the results and outputs; evaluating;
7. Phase 7: Stating principles for dissemination;
8. Phase 8: From the results and outputs, design recommendations and possible actions to be stated and carried out officially as a follow up of the Dakar Framework for Action, by international bodies (UNESCO, OECD, Countries having participated in the WSIS, …).

HUMAN RESOURCES

- A coordinating board;
- Teachers and professors;
- Researchers;
- Technologists and implementers;
- Experimenters.

MATERIAL AND FINANCIAL RESOURCES

–   Such a project needs resources for developing tools and methods,
    resources for experimenting them in some places, resources for
    establishing definite and permanent follow up in some places.
–   Resources include: human power, computers, technology and
    development, resources for people to meet and cooperate.

POTENTIAL ACTORS

–   Selected private companies;
–   International bodies;
–   European Commission;
–   La Villa Media as focal point of such a project, in partnership with:
    –   SATW (Swiss Academy of Technical Sciences);
    –   International bodies;
    –   Universities and schools;
    –   Private partners;
    –   Etc.

BIOGRAPHY

Prof. Bernard CORNU is director of La Villa Media (European
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(applied Mathematics) at IUFM (University Institute for Teacher Education)
of Grenoble, France. For ten years (1990-2000) he has been the Director of
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Ministry of Education. His scientific speciality is now the Integration of
Information and Communication Technologies into Education, and its
influence on the Teaching Profession and on Educational Policies.

As a member of IFIP (International Federation for Information
Processing), he has been (1995-2000) the chairman of Working Group 3.1
("Informatics Education at the Secondary Education Level"), and he is now
the secretary of the IFIP TC3 (Technical Committee for Education). He is
Member of the French National Commission for UNESCO, and vice-chair of
the Education Committee. He is also the Vice-Chair of the Governing Board
of IITE, the UNESCO Institute for Information Technologies in education,
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