IntersTICES, a Swiss Virtual Campus support mandate to foster a richer eLearning pedagogy in higher education and to set a general evaluation framework assessing innovative pedagogy

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Abstract :

The TECFA unit of the University of Geneva received from a major federal initiative, the Swiss Virtual Campus, a 3 years mandate entitled «Pedagogical support and evaluation ». Our mandate's tasks are : To provide pedagogical support to the SVC projects, mostly for the psycho-pedagogical aspects of eLearning; To make an inventory of the projects' pedagogical practices, insisting upon the exploitation of the innovative and interactive potential of ICT; To set the bases of an evaluation framework that would permit to assess the innovative nature of eLearning pedagogy in collaboration with the national and international community. This paper presents the context, goals, method, early results and questions emerging from the IntersTICES activities.

Introduction :

An institutional and national response to technological change

The TECFA unit of the University of Geneva received from a major federal initiative, the Swiss Virtual Campus[1] (SVC), a 3 years mandate entitled «Pedagogical support and evaluation ». The SVC program provides funds and support to 50 eLearning projects (28 started in 2000 and 22 in 2001) lead by professors from higher education institutions across the whole country. Every project had to involve a team of professors coming from at least three different institutions. Projects are mostly funded for three years and should lead to a full implementation of an eCourse in each partner university. For each project, the budget is approximately one million five hundred thousands Swiss Francs including fifty percent of institutional matching money. To foster projects' quality, coherence and resources economy, support mandates have been given to different organisms. In the first year, there was only a technical mandate given to the university of Fribourg (EDUTECH[2]) which have been launched even prior to the SVC to prepare the elaboration of the program. But quickly, as projects were starting, it became evident that pedagogy was a major concern for many teams. In 2001, it was then decided to provide pedagogical support mandates, in addition to a support project issued from universities of applied science (Forum New Learning[3]). The "eQuality" team[4] is for the German and Italian speaking projects and IntersTICES[5] is for the French ones. Lately, as implementation and institutional issues are emerging two other mandates have been put in place, one for the institutional management of eCourses implementation and one for the copyright issues.

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[1] http://www.virtualcampus.ch/
[2] http://www.edutech.ch/edutech/index_e.asp
[3] http://www.fnl.ch/indexF.html
[4] http://www.equality.unizh.ch/
[5] http://tecfa.unige.ch/proj/cvs

A consolidation program will soon be proposed to the Swiss Federal Government in order to ensure that the invested efforts are sustained long enough to have a significant impact on the universities. Efforts will be invested in four target sub-programs : 1. Maintenance of existing projects and user community support; 2. Establishment of 19 professional production teams located in the major higher education institutions; 3. A third call for projects (target is 76 accepted projects); 4. Coordination, mandates and program management.

As a federal initiative, the whole SVC program is in fact a national response to make sure that Swiss universities take an active part into the new knowledge economy and take advantage of the pedagogical, social and technological changes brought by the world wide adoption of the Internet. Since society evolves towards a knowledge society where individuals will have to learn throughout their life and will need to demonstrate/develop new skills and abilities, universities and national authorities need to launch joint initiatives to foster the emergence of this new culture of teaching and learning. Required changes involve all actors, students, teachers, administrators, policy makers, support staff, etc. and should be made in a global and shared effort. This sets the global challenge of the SVC program.

Global context and needs

The development and implementation of eLearning in higher education is generally perceived as a mean to foster a renewal of pedagogy in order to better prepare tomorrow's citizens for the emerging knowledge society. But doing so is a very complex task since, for most of us, the targeted socio-constructivist pedagogy[6] implies a major rupture with our traditional vision and practice of learning and teaching (Viens et Rioux, 2002). Factors impeding and stimulating the

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[6] Socioconstructivist pedagogical approaches propose learning activities/environment that foster students' autonomy and deep involvement; collaboration and co-construction of knowledge; anchoring of learning activities in real life problems/situations; deep knowledge construction and higher order thinking skills (like knowledge transfer abilities, mental model development, metacognition and critical reflection).

adoption and the success of this enterprise touch many dimensions of the educational system : students, teachers and many levels of actors from our institutions and society. For example, parents will influence student's performance by their attitudes, values and actions as well as they are likely to influence school politics by their participation to different committees. Likewise, exam practices will have an impact on what and how teachers will teach and what students will invest their energy on. The Swiss Virtual Campus program involves many levels of participants like program initiators and leaders; project teams including university professors leading the projects, professors from partner universities, coordinators, assistants, programmers, tutors, etc.; support mandates with experts from a specific domain; local support teams from universities; university administrators; and of course, learners from different backgrounds and levels. Their knowledge and experience of eLearning as well as their pedagogical values/vision and practice are likely to be quite different and quite limited since eLearning is very young in our educational world. Our culture of eLearning is to be developed (Viens, accepted) and our culture of learning and teaching per se is to be transformed (Blumenfeld & al., 2000) because we have all learned within a rather traditional context.

Given this multiplicity of involved agents, it is easy to imagine that SVC actors show a wide range of vision and knowledge of eLearning and pedagogy, going from scratch to a certain awareness and interest until a global vision and good experience of eLearning. From now on, this paper will mainly report the IntersTICES activities in order to share our goals, methodology and early results with the international community.

IntersTICES : objectives and tasks

Our general objectives are to globally improve the pedagogical quality of the Swiss eLearning projects and to establish the bases of a pedagogical evaluation framework that would permit to identify and assess the innovative practices of SVC projects.

In this context, the mandate's tasks negotiated with the SVC Steering Committee are :

1. To provide pedagogical support to the SVC projects, mostly for the psycho-pedagogical aspects of eLearning;

2. To make an inventory of the projects' pedagogical practices, insisting upon the exploitation of the innovative and interactive potential of ICT;

3. To set the bases of an evaluation framework that would permit to assess the innovative nature of eLearning pedagogy, in collaboration with the national and international community.

These specific tasks lead to two different types of objectives. First, an objective of action and instructional support as per the first task. Second, the two other tasks call for more research based concerns. Hence, we are trying to merge these two goal types and to address them simultaneously.

IntersTICES : method

The three main tasks of the mandate are closely interwoven and will feed each other as our activities evolve. However, support activities will mainly feed the two others as it is the basic field of action. Our research method goes the same way and, inspired by Charlier, Daele & Deschryver (2002) and Viens & al. (2001), combines research, action in the field and instructors instruction. In French such a research method is known as «recherche action-formation». It has the advantage of providing realistic and rich data from practitioners involved in real actions and to have more chance to lead to significant impacts on both research and practices. Taking into account researches on training and support for adult public (Knowles, 1990), our approach will be participative and be defined/carried out in collaboration with the actors of each of the projects. Their pedagogical choices will be respected as well as the privacy of the collected data.

Concerning the first task of the mandate we have proposed to the projects to start with the following 5 step strategy :

- **First step : first contact and orientation**

  A meeting with the project's team members to discuss about the mandate, mutual expectations and strategies;

- **Second step : current situation, needs analysis and follow up planning**

  A meeting with the project's team members to assess the current situation and to make a needs analysis based on a 25 questions questionnaire (general information, team members profiles in terms of technology and pedagogy, the pedagogical scenario, institutional aspects, specific needs, ICT and socio-constructivist pedagogy, further support planning);

- **Third step : Specific support to the projects**

  According to the needs and action plan identified during the previous meetings and from emerging needs as well;

- **Fourth step : animation of a virtual community**

  Sharing of problems and solutions between projects within a Web collaborative environment (Yahoogroups.fr), and reflective practice by discussion;

- **Fifth step : collective face to face activities**

  involving all the interested project' teams : thematic workshop, seminars, etc., scheduled according to convergent interests and needs.

The second meeting (interview) will be recorded and then interactions will be typed in a word processing file to permit different qualitative analyses. Notes will be taken during meetings and will contribute to feed the second and third tasks. We will search the Web for development

resources and reflective texts to keep up to date and to provide our projects with the best available procedures and tools.

We are involved in a full collaboration with the other support teams of the SVC. At the institutional level, we participate to coordination committees and other meetings to share our vision of eLearning pedagogy and ICT culture with the greater SVC community. This is an important action since it permits to influence the orientation and the culture of the SVC.

The IntersTICES team has started its field activities in November 2001 and has now fully completed the first step. A first report have been produced in February 2002 and is currently available online from our Web site[7]. The second step is to be ended by the end of June while the other three steps are slowly taking place. We had about 12 direct support meetings and the virtual community of practice has been launched in April. A first thematic face to face meeting is planned for June 5th. The purpose is to share and discuss a matrix linking different types of objectives/abilities/competencies with specific eLearning activities. It will intentionally be held in a train station restaurant in order to provide a fast access for projects that have to travel across the country and to provide an informal atmosphere that should permit to develop a greater feeling of community and of sharing among participants.

Early results

Here are the main observations coming out of the site's visits that took place during the first three steps of our action strategy. They will be presented using the following categorisation : global observations, technological aspects, pedagogical aspects and institutional/management aspects.

Global observations

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[7] http://tecfa.unige.ch/proj/cvs/doc/rapport_annuel01.pdf

The fact that we arrive after the initial launching of the projects reduces the role that we can play and the outcomes that we may expect. It is hard to change a three year projects that has already covered more than half of its activities. Thus, it is more difficult to influence the projects that were first accepted in the year 2000. With those projects we may provide guidance for the implementation and evaluation activities rather than for the design and production activities.

Considering the 6 basic phases of a systematic development approach : analyse, design, production, small scale implementation/evaluation, revision, large scale implementation, we have observed that most projects have done a shallow investment in the analyse phase, a mean investment in the design, a major and deep investment in the production phase and that the last three phases are rarely addressed for now. Production of content is the main activity and takes all the teams' energy.

The fact that in order to answer a qualification criteria every project involves at least three universities adds complexity to an already complex challenge. Three universities bring three institutional cultures and make meetings very hard to organise. It may be the price to pay to develop a greater collaboration between institutions. Some projects deal more easily with this problem. Mostly those who had already collaborate before the SVC project was set up.

An additional concern, which is also inherited from the qualification criteria set by the SVC program, is the fact that most projects are developed in two or three, if not four languages. This constraint adds complexity and cost to the projects.

Technological aspects

For many projects, the selection of the platform was time and energy consuming. The main problem seems to be that people do not know the available tools, their respective pedagogical potential and conditions of utilisation. In addition, as projects evolve, new needs emerge and new

tools are requested. Generally, only a few members of the team have a sufficiently rich knowledge of and experience with technologies to easily address these kind of issues.

Pedagogical aspects

We observed an important heterogeneity inter and intra projects in respect to pedagogy. Their vision of eLearning pedagogical potential and of active or socio-constructivist pedagogy as well as their experience are at different level.

- In respect to innovative pedagogy (student autonomy, collaborative learning, project-based learning, high level cognitive skills/knowledge), pedagogical practices and representations of pedagogy are quite traditional. For about half of them, a fruitful ICT integration seems to rely on the integration of a "mediated-teacher" controlled approach like the following sequence : teach/tell/read, exercises, quiz, test. The focus is then on individualized instruction and mass teaching.

- Some projects want to integrate the communicative and collaborative dimensions of the Net, and many of those are doing it as a complementary activity after direct instruction. In many projects, communication and collaboration are feared or perceived as complex to managed and non efficient learning activities. In such a context, we observed very few real case based, project based, or collaborative inquiry approaches. Many factors were brought by the projects members to explain this situation:

    - Some wants to do it but do not know how to;

    - Teams where some colleagues do not want to go that way;

    - Modules are already too advanced to go back;

    - Very difficult to do with big groups;

    - Not efficient for novice learners, just for advanced learners;

- Some feel pressure from SVC authorities to individualise instruction through online activities.

- A little more than 10% use a procedure guideline to help in the development of online pedagogical activities. Hence, development is mostly intuitive.

- Only 5 % have a detailed scenario describing the context, the objectives, and a detailed planning of students/teachers/tutors activities based on a needs and context analysis.

Institutional/management aspects

As it was earlier said, the number of institutions raises the complexity of the tasks. It is the same with the heterogeneity of team members visions and experience with both technology and pedagogy. The management of such big projects is quite difficult and a certain number of teams have decided to work cooperatively rather than collaboratively. This is to say that they share the money and tasks, work individually and share the results.

Emerging questions, problems and other issues

For the moment we face many more emerging questions than answers and solutions. We provide herein a short list of questions that are of major concern for our mandate.

- What is an innovative pedagogy? Examples? How can we stimulate/support high level cognitive skills/knowledge ? What is added by the integration of ICT ?

- How can we develop a detailed scenario ? Tools? Guidelines ?

- New roles for learners, teachers, tutors, institutions ? What are they ? How can we support the transition ?

- How can we teach online to many students (100-1000) ? Animation, support, evaluation, etc. ?

- Online tutoring : who does it, how, when, why, how much is required?

- Evaluation issues (students learning, self evaluation, formative evaluation of prototypes), How to ? What ? When ?

- Students characteristics : Multilevels of topic background, perspectives, language skills.

- Management of decisions and production within teams, and with CVS orientations.

The answer of the projects' participants to our initiatives varies from ignorance to deep involvement in collaborative activities that are specifically addressing some of the above questions. But globally we can say that the greater majority of them is happy to have access to pedagogical resources and support.

Conclusion

For now we can only conclude that supporting the development of eLearning at such a large scale is a complex and difficult challenge. The payoff in terms of culture development and societal changes may worth the effort but it is in the long run that we will be able to assess them.

A new and important role emerged for IntersTICES. In fact, we are in between the SVC steering committee and the projects, between project partners coming from different universities and between projects and other available resources (mandates and local resources). We are then asked to play a mediator role to help people to communicate and to build on each other perspective.

Finally, we will adapt our strategies in order to take into consideration each project specific context and needs. We will also adapt to address the multidimensional problems that are emerging as projects are evolving. In this perspective, our efforts will go beyond the pedagogical procedures support to embrace the evolution of a vision/culture of ICT integration in online education.

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