

E-Learning in Cameroon: Stand and Perspectives

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1 History of E-learning in Cameroon

E-learning is not a widespread and accepted concept at Cameroon Universities. In the 1980s, Cameroon has realised distance learning through the School of Agronomy now at the University of Dschang. It consisted of the traditional approach based upon postal services. But since the postal branch has collapsed in Cameroon and the Internet has not yet replaced it, this type of teaching has become less effective and the University of Dschang has put an end to distance learning. Even the use of CD-ROM has never been taken in account at that University emphasizing thus the distribution problems. The very first seminar on E- and distance learning held at the National Advanced Polytechnic School of Yaounde on April 2002 has gathered more than 100 participants and retained 13 publications [TT 02]. Various actors were present: Agence Universitaire de la Francophonie, The World Bank, The Ministry of Higher Education etc.

2 E-learning Platforms developed at Cameroon Universities

At the University of Yaoundé I, Boyom Sop Flaubert developed a Virtual Campus, which should simulate campus activities into a computer and shall encompass a data base geared toward a Course Management System, a navigation tool and different tools for the personalised management (Learner, Teacher). But this system is far from being operational and should better go along with other experiences instead of inventing the wheel anew. [BE 02]

SYDIME (Système de Diagnostique Médical) developed at the Faculty of Medicine and Biomedical Sciences of the University of Yaounde I by Yatchou is a simulator that generates a set of assessments related to virtual patients. An emotional pedagogical agent assures the guidance of the learner while case based reasoning is used to validate his forecastings. Developed with Java, it offers students the acquisition of medical knowledge based on simulation of diseases. Here different validity levels have been defined (1 = excellent diagnosis, ... >3 = bad diagnosis).[YTBT 02]

The more elaborated E-learning tool in Cameroon is certainly the CAL-Antennas (Computer Aided Learning – Antennas) developed by [VT 02]. The CAL-Antennas teachware plays different following roles: computer aided learning, simulation of various types of antennas, computer-aided design of antennas, contribution to the manufacturing of antennas, simulation of tests and measurements of antennas.

The teaching of such a course relies on several complex mathematical and physical models. The CAL-Antennas is very important since it responds to a twofold need: Firstly helping students in Southern Countries where laboratories are not equipped with adequate material and secondly stimulate a local production of antennas. The CAL-antennas has three parts: a *tutorial* which summarizes the course with static or dynamic pictures where basic concepts are taught. Each part ends with exercises.

EITI (Environnement Intégré de Télé-enseignement basé sur Internet) is an environment model of distance learning based on the Internet. It is developed at the Laboratoire d'Informatique du Multimédia et Applications within the National Advanced Polytechnic School at The University of Yaounde I [Yat 02]. EITI is organised around four modules: a *Knowledge Construction System* where objectives, working plan, contents and knowledge units are assembled, a *Knowledge Acquisition System* which builds interfaces to learners, an *Evaluation System* which supervises the exercise editor and the monitored exercise table and a *Management System* which controls the whole environment and assures its consistency. This tool can be instantiated with different topics. Actually it is instantiated with courses from the Faculty of Medicine and Biomedical Sciences of the University of Yaounde I.

All these platforms are not commercial and geared towards specific needs. Most of them are experimental and not yet fully implemented. International standards on the implementation of e-learning platforms are not always respected. None of these platforms is based upon ontologies or semantic-driven properties [Kol 04].

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