

SUMMARY

The information and communication technologies have successfully been integrated in our daily activities. Virtual education is a very important field that has found in the information and communication technologies an good alternative for its development.

The communicative aspects in the learning procedures are a topic to study. With this purpose, the interaction and interactivity capacities developed in virtual learning environments (VLE) 2D and 3D are studied in this master thesis. The goal is to identify which is the platform that best benefits the development of the communicational processes.

Firstly, the content of the discourse of the students' interactions is organized identifying three kinds of interactions: Intrapersonal, Interpersonal, and Intragroup; in addition the interaction is classified in a system of Behaviors and Aptitudes shown in the processes of interaction. It starts from a survey where a set of students evaluated their "communicational experience pedagogically developed in the 2D environment of Moodle and the 3D environment of OpenSim".

In this Master thesis we present an evaluation model of the communicational aspects by means of using computer-based multicriteria decision aiding methods. Several evaluation modules have been built in order to determine the performance of the 2D and 3D e-learning platforms at the Polytechnic Superior School of Chimborazo. The work includes the study of the data with numeric, linguistic and relational methods such as OWA, ULOWA and ELECTRE respectively.