1. INTRODUCTION

There are numerous students referred to as having learning problems, because they evidence greater difficulty in learning than most other students of a similar age or because they have a disability that constitutes a barrier, preventing or delaying access to active participation in learning. Others still, without unveiled limitations and even with skills above average, tend to be prone to academic failure. Students in today’s classrooms present a wide combination of abilities and learning needs, with differing degrees of readiness and background knowledge, varied educational and cultural experiences, differing rates, styles and deepness of skill acquisition, and broad diversity in the ability to maximize learning through traditional educational strategies and materials.

Inclusive policies as well as technological developments have allowed for many more pupils with learning differences and difficulties to attend schools today. Their needs are demanding, varied and complex pressuring profession-
als to find appropriate ways to enhance their learning. Therefore, it is of utter importance to create an environment where learners become confident, autonomous learners, increasingly able to use their creativity and to take safe risks.

One way of looking at this problem, analyzing it and seeking a solution may be by considering the perspective of Universal Design for Learning (UDL). Universal Design for Learning is a concept introduced by David Rose in 1984 who has worked at the Center for Applied Special Technology (CAST) since then. His work and that of his fellows at CAST, provides a vision that ruptures the “one-size-fits-all” model of education for the masses that dilutes the vast individual differences and, therefore, expands the opportunities for learning for all students with diverse learning characteristics. For UDL, diversity is the keyword: the diversity of students in schools demands diverse enabling strategies so that no one is excluded and every one can benefit from equal opportunities.

The UDL framework is grounded in cognitive and neural perspectives of learning. It embodies a set of principles based on research that constitutes a practical model to maximize learning opportunities for all students. Learning takes place through changes made at a neurological level where complex functional networks are interconnected. For learning to happen through the processing of information, via the interpretation of stimuli, the manipulation of concepts, the involvement and activity in the surrounding environment, which then leads to the accommodation of knowledge, it is necessary that the individual’s recognition, strategic and affective networks be fed adaptively. The three principles of UDL, which consist of (i) Providing Multiple Means of Representation; (ii) Providing Multiple Means of Action and Expression and (iii) Providing Multiple Means of Engagement, are described in detail ahead in this article.

These principles should be applied to all students in a classroom, because there is a fundamental incompatibility between them and the standardized curriculum and pedagogical practices that are still pervasive in today’s schools. UDL principles focus on the adjustment of the learning and teaching process, through differentiated instruction and the implementation of curricular adaptations, rather than on retrofitting for the student.

Such notions are in line with current perspectives on the support of students with adverse learning paths, advocated by major international institutions like UNESCO (1994) and the World Health Organization (2004). They sustain that environment plays a crucial role on rising and/or aggravating constraints to the individual’s performance and that, subsequently, it should adapt to the individual and not otherwise. They aim at promoting access and participation by acknowledging student diversity as an added value and at eliminating and/or reducing barriers in order to allow any student to fulfill his/her potential and thus obtaining the best academic results possible in the least possible restrictive environment.

Web-based environments for communicating, networking and collaborating, often referred to as Web 2.0 or social Web have been heralded as flexible contexts that can easily be adapted to individual needs. Understanding how such technologies can be used for educational purposes has become a focus of research in various fields of Education. Research suggests that the use of communication technologies (CT) fosters students’ development and enhancement on a number of aspects, including collaboration (Schellens & Valcke, 2005; Persico Pozzi, & Sarti, 2009; Forment, De Pedro, Casah, Piguillem, & Galanis, 2010); knowledge construction (Yap & Chia, 2010; Lucas & Moreira, 2010; Deed & Edwards, 2010) critical thinking (Garrison, Anderson, & Archer, 2001); socialization (Richardson & Swan 2003); satisfaction (Hostetter & Busch, 2006), or inclusion (Walker & Logan, 2009; Ware, 2002).

Students’ inclusion has been one of the major challenges for school systems in the past decades. It is safeguarded by the Inclusive Education Framework (IEF) (UNESCO, 1994) which poses that inclusion rejects exclusion and that Education is for all “regardless of their physical, intellectual, emotional, social,
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