Chapter 25

Dante Project: Experience the Immersive Virtual Worlds

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ABSTRACT

Experiencing virtual world teaching had always the purpose to understand its role and possible uses in education. It is easy to see a direct use of 3D worlds in teaching: give the possibility to the students to work and practice different things in a free and flexible environments. This was always the dream of teachers in our era, that tries to put at the centre of the education their students. Giving a sense to 3D world teaching is not only to define what, when and why it can be used. Other requirements to understand better this process are a positive response from past experimentations, to have a feedback to evaluate; and a basic “training” of professors with the aim to put them in the condition to efficiently use (before the students) those virtual environments. These can also be described as “augmented environments”, not always linked to 3D world because the intrinsic value of this definition.

INTRODUCTION

Since 2004 we had the chance to test many times the use of virtual worlds in a scholastic environment, following the entire cycle of a classroom, from the first year to the last one (the fifth, before the insertion in the first level of secondary school). We used a variety of virtual worlds like:

- Italcity
- Nuovita
- Scuola3d

Active Worlds: Based 3D environments

- Second Life
- edMondo

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Some of these projects are already ended due to their limitation in time or unknown causes, for example Avatar Project that was proposed at European level, or Heritage, a history-based virtual world now closed but finalized to a didactic use. Others are promoted by Ansas of Florence (ex INDIRE, or National Agency for Development Schools Autonomy) and, when the utilized platform will reach the necessary requirements (like SecondLife, but moderated and independent) they will become open for free use by the schools. We can mention the work made in Scuola3D, used since 2005 on Active Worlds-derived platform. This is an autonomous platform with controlled log-in, project linked to Istituto Pedagogico di Bolzano. The platform AW Edu is another relevant example of the use of virtual worlds in didactics. Other examples are the use of those platform at European level, where international consortia of universities had built in virtual worlds (like SecondLife) archaeologically accurate representations of historical “lands”, like representation of Sumerians villages, Roman harbours, monuments etc…

Didactic in virtual worlds follows Papert’s theories of constructivism: “children actively build their beliefs and knowledge”….“they gradually improves their understanding of reality through a bilateral exchange with the environment” (Camaioni Di Blasio, 2002). Indeed in virtual worlds students can build and manipulate their virtual learning object, becoming actors in their educational processes. This is called “learning by doing”. Others talks about “experiential learning”, linked to child’s play how is “intrinsically useful for learning, because playing we always improve our performance” (Anichini, 2012). Due to the many simulations available, sometimes this theory is applied to Kolb’s “experiential cycle” as a substitution or integration of the of active experience ((Boca, Pace, Severino, 2009) “in general, methodology based on virtual worlds is chosen for the possibility to visualize problems or events derived from the real life in a protected environment. The virtual reality is made by the use of images or 3D environments where subjects and object can interact following a mathematical ruled world” (Camaioni & Di Blasio, 2002). This virtual way of teaching can be seen as an instrument for “generative communication” or like “creative agent”, or “generative paradigm of knowledge….who is the starting point for consolidate a relation with other techniques, other knowledge, other ideas” (Toschi, 2011).

Further, the use of a 3D worlds was introduced in many disciplines like: Italian language teaching, history and mathematics, arts, science and geography by a direct experience “on the field”. There was the chance to directly evaluate the utility of teaching with the use 3D worlds. The classic way of didactic that was consolidated in the past was not abandoned. It will be useless to cut it out, but it will be modified with the aim to keep the students at the centre of the educational process.

Today, experiencing teaching in virtual world had the purpose to understand its role and possible uses in education. It is easy to see a direct use of 3D worlds in teaching: it gives the possibility to our students to work and practice different disciplines in a free and flexible environments. This was always the dream of teachers in our era, that tries to put at the centre of the education their students.

Giving a sense to 3D world-teaching means to define what, when and why they can be used during the education of children, this is not easy because: we need a strong and positive experience from others and and a basic “training” for professors with the aim to put them in the condition to efficiently use (before the students) those virtual environments.

3D worlds can also be described as “augmented reality”, not always linked to 3D world because the intrinsic value of this definition (see Figure 1).
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