Distance Learning Training Programme using Serious Gaming Simulation Techniques

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Introduction

Training entrepreneurs is a complex matter. There is a great number of techniques that the learners need to master (management study, market approach, HR management, local development strategy, etc.). Moreover these topics mostly belong to organisational and behavioural fields and may prove tricky to teach to an audience which often lacks availability and commitment.

Using distance learning allows a timely provision of the knowledge, precisely when needed by the managers, in order to take informed decision. However, managers are often facing crisis situations, during which decisions must be taken in a very short time and for which the promptness of the reaction is a condition for success. This implies that the training must not only focus on the delivery of the knowledge but also organise practical modules that closely replicate the reality.

Tutorials have proven their effectiveness for teaching computer skills and languages by offering personalised paths and evaluation systems. These are adapted according to the training objectives and to the target audience. How can we adapt this methodology to managerial training? It can be achieved by using role playing techniques and organising the immersion into virtual situations, using as starting points the roles attributed and the situations suggested by the software/programme. In order to achieve this, the use of story telling techniques coming from video games and online virtual worlds is an essential innovation. It has already been put in place and tested in some teaching fields such as "Project Management" or "Crisis Management" (since 2001 at EM LYON).

An immersion in "serious gaming" during practice oriented training programmes in management should be included. With this cross-section approach which ignores any internal boundaries related to the hierarchical organisation, the use of games such as "front offices" appears very relevant in a complex field which requires a lot of knowledge, a strong sense of analysis and an ability to react rationally.

Characteristics of the Serious Game

The scenario dynamics rely on a quest for progress/rewards, which is very often used not only in the video games world but also in the netsurfing and training environment. There are three elements that we will try to implement jointly in the online training programme.

The main innovation is the questioning of the traditional philosophy that precludes the construction of e-learning programmes. These traditional programmes focus on multimedia production of pedagogical content along with case studies and self-evaluation exercises. On the contrary, in the entrepreneurship-related training programmes, the emphasis is put on the user experience in the virtual world, as he/she is considered as the actor in the game. The accent is also put on the pedagogical and methodological content that are provided to help him/her to solve the problems faced

throughout the role play. Therefore we are now in a system of training through action inspired from investigation games and behavioural simulators of the SIMS (strategic life-simulation) type.

The creation of such a programme requires an original development phase. This is quite different from the preparation of a training programme, the activities of an in-class course or even the writing of a reference book, which are the staple techniques used for the elaboration of distance-learning content. However, the creation of such a programme can benefit from the competencies coming from the interactive writing techniques, which have been developed in the video game and multimedia industry.

Such a programme also implies the development of behavioural evaluation tools, which analyse the actor's decisions, both in terms of the nature of the responses and of their timing. This allows providing the actor/player with a personalised debriefing which depends on the action path he/she has chosen during the role play. This type of indicator can be typically considered as a "smart" indicator, as it offers to each individual user a debriefing adapted to his/her personal experience. This evaluation system also presents the following advantages:

- It stimulates exchanges between participants to compare their respective experiences.
- It extends the programme longevity by offering the possibility to re-run the simulation to improve the user's final evaluation.

The availability of multiplatform technologies will allow the optimisation of the simulation elements that can accommodate the broadcasting constraints, the standardisation and the confidentiality of the data. It should eventually allow the training sessions to offer an experience very similar to an immersion in a "real" video game. In order to reach this level of experience, all media tools will have to be optimised: images, sound, animations as well as the reactivity and adaptation capabilities of the virtual characters.

**Using the Serious Game in Training**

The original features of these training programmes allow:

- The actualisation of the knowledge database without having to alter the game scenario
- The customisation of a training game using all the existing knowledge elements and the pedagogical processes but additionally providing a virtual world that is adapted to a specific need
- The extension of the programme longevity allowed by its personalised evaluation system.

A series of surveys conducted by CEGOS and Le Préau among online training programme users showed a demand for programmes based on generic products that can be highly customised. This adaptation guarantees in turn the adhesion and commitment of the users. It also shows that the interest of the users is achieved through the following elements (see the figure below):

- The quality of the scenario, i.e. storytelling
- The quality of the knowledge database of each institution, which needs to be constantly improved and updated

- The availability of collaborative tools, which allow and stimulate the exchanges between learners.
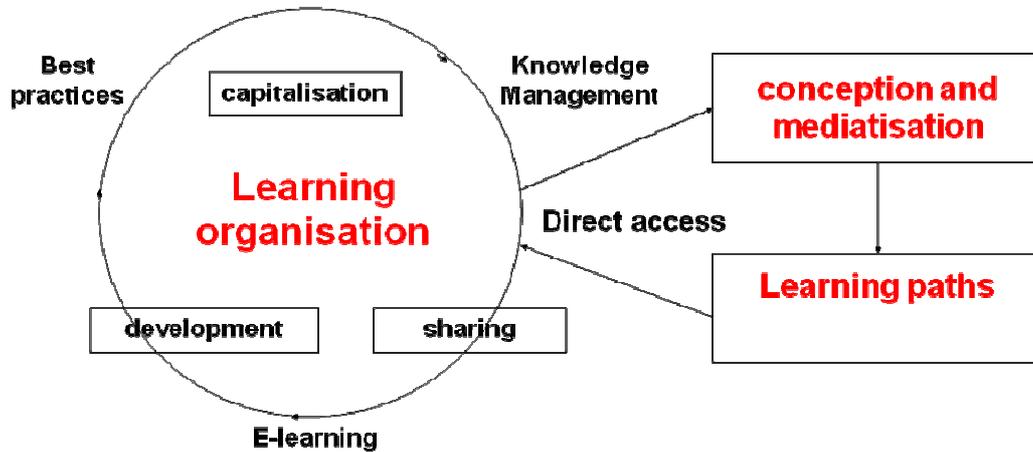
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