Chapter 6.3
Managerial Computer Business Games

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INTRODUCTION

Interview with Anthony Davidson, SuperAguri F1 GP Driver (autosport.com, March 2, 2007):

Q:*Can you actually learn anything from the [F1 videogame] though?*

AD:*Absolutely. When I did the 2004 season, I really relied on having video data from the team and using the PlayStation games as well to learn the circuits. We always deal in corner numbers, we don't use the proper corner names, so we have a little map in the car with the numbers.*

For you to visualize it beforehand is a help, because when they talk about a bump in turn three then you know what they are talking about before you have even walked the circuit or seen any onboard footage. You know roughly what the track looks like and when you get out there you smile because it is exactly what you were doing in your living room. And now the graphics have stepped up another level it is so much more realistic.

F1 drivers can benefit from computer simulations, with a supplement of training before racing on a newly built circuit, with no consolidated knowledge. Managers (and students, too) can benefit from PC-based simulations that recreate complex business worlds as well.

Books contain theories, along with a good number of examples. Computer-based business games can add dynamism and a temporal dimension to the standard managerial theories contained in books.

Many researchers think that the potential of the computer as a learning tool is very high if we involve the user in a simulation process, instead of giving him a description of reality. This theory is confirmed by many field examples, as shown before by the Formula 1 pilot, who adopts a particular software in order to learn how to drive on a circuit that he has not tested directly. U.S. Marines play Quake and Unreal to simulate the mission in which they will be involved. Business games, finally, start to be adopted in managerial education as learning support tools.

For example, EIS simulation has been developed at Insead Business School in order to simulate organizational change, while FirmReality has been developed at Bocconi University to study the integrated use of organizational capabilities to gain competitive advantage.

Scientific and managerial literatures recognize the potential of these instruments for learning purposes (compatible with andragogical and collaborative learning theories), but cannot address their design and the integration within distance-learning practices.

The current debate on computer simulations involves the research and the standardization of rules for the project phases, in order to take advantage of the potential attributed to this tool, and enhance the compatibility between managers/students and this form of learning.

FACTORS AFFECTING LEARNING THROUGH BUSINESS GAMES

Managerial business games, defined as interactive computer-based simulations for managerial education, can be considered as a relatively new tool for adults' learning. If compared with paper-based case histories, they could be less consolidated in terms of design methodologies, usage suggestions, and results measurement.

Due to the growing interest around virtual learning environments (VLE), we are facing a positive trend in the adoption of business games for undergraduate and graduate education. This process can be traced back to two main factors. On the one hand, there is an increasing request for nontraditional education, side by side with an educational model based on class teaching (Alavi & Leidner, 2002). On the other hand, the rapid development of information technologies has made available specific technologies built around learning development needs (Webster & Hackley, 1997). Despite the increased interest generated by business games, many calls have still to be addressed on the design and utilization side.

We start with a brief description of factors that can lead to a positive learning effect for managers and students. We then analyze and discuss the facets related to business games that can facilitate the learning processes described above.

In a simplified view, effective learning occurs when the tenets of collaborative learning are respected (see Alavi, Wheeler, & Valacich, 1995 as a notable example). Following this perspective, we need a strong individual involvement in the learning process, social interactions, and a clear focus on problem-solving through practical resolution of complex problems.

The above-cited characteristics are necessary in order to achieve effective learning, even if they are not specifically designed to analyze learning processes mediated through technology. This article refers to collaborative learning contexts mediated through IT, defined in the literature as virtual learning environments (VLE).

Extant literature considers two other important aspects which ensure effective education. First, it is necessary to consider the relationship between individuals and the instructor (Arbaugh, 2000; Webster & Hackley, 1997). Second, it is necessary to include aspects concerning the relationship

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