The Paradigm of Managerial Education: Role of Management Simulation

Leonardo Caporarello

Learning Lab

SDA Bocconi School of Management

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"Learning is experience. Everything else is just information". Albert Einstein

Management education paradigm has witnessed an important evolution in recent years:

- from teacher-centric (whose objective is to teach)
- to learner-centric (whose objective is to make learning)

The learner-centric model is not based on the knowledge transfer, instead it is based on creating environments and experiences which guide the learner to discover, gain knowledge and solve problems through involvement and active participation.

Additionally in learner-centric model, the way of learning can be realized through both:

- experiencing, i.e. the process of knowledge creation through the experimental transformation
- teaching, i.e. the analysis and discussion of the main ideas and messages that emerged from the experience itself.

In this context, computer-enabled business simulations and business games – referred as management simulations – represent an effective methodology. Management simulations offer some important advantages like: supporting the definition of a different orientation towards learning, living a professional experience individually or as a team, monitoring the process of experiencing, then analyzing and discussing the managerial implications.

Five main dimensions of the new paradigm in management education:

1. Content: From limited to rich

2. Process: from traditional to experiential

3. Result: from knowledge acquisition to knowledge creation and integration

4. Location: from course-centric to participant-centric

5. Tools: from traditional to blended

Unlike traditional learning methods, management simulations allow participants to design and implement decisions in a "safe" environment, and to monitor their implications/effects. That helps to reduce the gap between the classroom and the real world decisions, through experiential learning methods in which participants design, implement, & monitor (Romme, 2003).

Advantages of a management simulation may be reflected in the different learning styles, classified as:

- Cognitive learning, where the participants learn by observation of facts and circumstances, through practical experience;
- Emotional learning, where participants learn how some attributes/factors - including mindset, prejudices, expectations, emotions, the need for social interaction - can influence the success or otherwise of a particular decision or action;
- Behavioral learning, where participants learn how to make decisions and implement actions and changes in their behavior, based on lessons learned during the training process.

What are the main characteristics of a management simulation?

There are many evidences in literature that argument about the validity and effectiveness of management simulation as learning methodology. Indeed, management simulations, as discussed in this working paper, enable the learning experience in terms of:

- **context and scenario**, which may change during the simulation or game as a result of the participants' course of actions,
- **communication and collaboration (interaction) processes** of the participants, both among themselves and within the system,
- **feedback** that the system can elaborate and return to participants during the course of the simulation or game,
- level of **participation** and involvement related to the utility perceived by the participants

How much management simulations are effective for learning?

Management simulations are based on interactive, advanced and symbolic, models that allow participants to live a managerial situation (i.e. a challenge or issue), which is characterized by a certain level of complexity (very low to very high). Thus, a simulated environment allows participants to experience their managerial skills in the given context and scenario.

Based on the analysis of the results of such decisions, participants could react setting new values for some of the variables of the simulation, and make new set of decisions.

Through some logical steps – understanding and analysis of the context, research and evaluation of possible actions and behavior, choice and decision – participants can practice their managerial skills to identify and propose solutions to the challenges/problems presented by the simulated situation. In addition, the simulation can provide feedback both on results – intermediate and/or final – and the process through which they have been reached.

The management simulation, therefore, offers participants the opportunity to act, reflect and react (Lundy, 2003).

Management simulations can effectively improve learning process by:

- establishing a high level of motivation and involvement of the participants (Hoberman and Mailick, 1992)
- supporting the participants to apply what they already know and have learnt in real, even if simulated, situations (Anderson and Lawton, 2002)
- giving the freedom to experiment with new behaviors in low-risk environments
- getting either real-time or asynchronous feedback (Senge, 1990)
- supporting the processes of cooperation among the participants (Mitchell, 2004)

The teacher's role is essential in a management simulation, in particular in a blended environment, as it defines the context of the simulation, intervenes in the process of interaction among participants, and manages the debriefing of the simulation's results.

Going back to the previous question, i.e. how much management simulations are effective for a learning initiative, it is possible to compare the effectiveness of learning initiatives that does and doesn't make use of a management simulation. In particular, the literature has analyzed and compared the effectiveness of three methodologies: business simulation, business games, and case study paper.

The effectiveness of a learning initiative can be measured in terms of reaction (degree of pleasure and perceived usefulness), learning (level of new or enhanced competencies thanks to the learning initiative), and transfer (behavioral change in the context in which the new or enhanced competencies are applied).

According to some research findings, the contribution of such simulations, games and paper-format case studies to the effectiveness of a learning initiative is significantly different. Business simulations and business games positively influence the effectiveness of a learning initiative, in terms of all the three variables mentioned above (reaction, learning, transfer), when compared with the use of paper-format case studies. Comparing the effectiveness of a learning initiative that makes use of a business simulation or a business game differences are not significant (Feinstein, 2001; Kenworthy and Wong, 2005; Graham and Senge, 1990; Graham et al, 1992).

The SDA Bocconi Learning Lab is devoted to the research and to develop tech-based methodologies for management education, and how the use of technology can influence their evolution.

Have any questions, ideas, comments? You may want to share them with us at learninglab@sdabocconi.it

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