

## BUSINESS GAMES: A BASIS FOR EDUCATION

### **Resumen / Abstract**

Cómo educar a las personas de la mejor manera es siempre una pregunta muy importante. Estudios de casos, obras del papel y juegos comerciales se muestran como los casos más importantes de una **nueva generación** de cursos. El objetivo del presente trabajo es dar una apreciación global de casos existentes y mostrar algunas posibilidades de emplear estos cursos en la educación diaria

*How to educate people the best way is always a very important question. Case studies, role plays and business games are mentioned here as the most important instances of a new generation of courses. The aim of the present paper is to give an overview of existing instances and to show some possibilities to employ these courses in everyday-education.*

### **Palabras clave / Key words**

Juegos comerciales, cursos, educación

*Business games, courses, education*

## **INTRODUCTION**

It doesn't matter if we talk about school, university or work. Nearly everywhere you find the situation of a one-to-many-teaching. But is this useful? A statistic raised in Germany says that people who read something only remember 20 % of this, those who read and hear the same remember 40 %. Those who read, hear and say the subject-matter remember 60 %, but you receive the best result (80 %), when you do the things you have to learn. That suggest itself, that you try to perform every kind of knowledge you want to impart in the last way. For this reason several kinds of courses had been developed.

At first an overview over the history and the development of games and simulations will be given.

Then the structure and essential constituents of the three sorts of courses will be presented. They differ not only from the structure, they also differ from their behaviour and their operation area.

The structure, advantages and disadvantages of each kind of course will be presented in the next chapters. According to the kind of subject you want to teach, you have to choose one of these presentations.

This paper wants to give some advices to choose the right kind of course for your education. These proposals will be supported by some conclusions taken from over 100 polls made with students from Germany, Russia and Switzerland.

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*Recibido: Junio del 2003  
Aprobado: Septiembre del 2003*

**HISTORICAL DEVELOPMENT**

The oldest form of a simulation used in a playful situation is the great game of kings, chess. This war-game was developed about 2000 years ago in the area of India. It's concept of two fighting armies is known all over the world.<sup>1</sup>

In the 17th and 18th century real wars were planned on great maps. This kind of simulation was extended to the use of big sandpits and figures to re-enact real situations.<sup>2,3</sup>

In the 1930s scientists started to examine the phenomenon of playing. The result of this research was the development of the game theory. These theories were the basics for the development of the first business game in 1956 by the American Management Association. They tried to transform the concepts they made by using simulations in war situations into business situations. The fast development of computer technology made it possible to create simulations that contain the most important parts of an enterprise.<sup>1,4,5</sup>

**NEW KINDS OF COURSES**

The topic of this paper contains the word game. At first, some short definitions of games will be given and the context all definitions have will be emphasised. After this, three kinds of courses (case study, role play and business game) will be presented.

**The concept game**

A big german encyclopedia defines the word game as an activity that is done without a deliberate purpose and that generates pleasure by itself. A similar definition is given by Huizinga in the late 1950s. A game is an activeness that is done voluntarily by the participants and that is combined with happiness and tension. Most of the definitions that can be found contain the words pleasure and entertainment.<sup>6</sup>

**Case study and role play**

A real situation is nearly always the basis for case studies. The exercise of a case study is to analyze this situation and to work out an useful solution. This solution can normally only be valued by the lecturer or could be compared to the genuine answer.

The objective target of role plays are located in another scope of education. Their focus lies on social competency. The participants act in different roles located in the play. The individual acts as he thinks the person he is playing would react.

The most important point of view in a case study is to realize the formal context of the considered situation. The most characteristic feature of a role play is to exercise behavior patterns.<sup>5</sup>

**Business game**

In the last 60 years many several definitions have been created. Kibbee, Craft and Nanus define a business game as a "dynamic training exercise utilizing a model of a business situation".<sup>7</sup> Greenlaw, Herron and Rawdon "define a business simulation as a sequential decision-making exercise structured around a model of a business operation".<sup>8</sup> The most expressive definition

is given by Schellhaas. He defines a business game as "a dynamic simulation model of a thought or real existing economically system" <sup>4</sup> that should be guided by the participants using periodic recurring decisions. These results of decisions should be proved and the next decisions should be perhaps adapted after every period.

These definitions show, that in a business game, elements of role plays AND case studies are joined to one system. Like in a case study, the situation that should be solved is very often realistic and like in a role play, the participants take over a special role they have to execute. Because of the structuring by periods business game is not only a one-to-one combination of role play and case study. Every business game has a mathematical model as basis on which all decisions refer to.

The following table shows in an overview the differences and the most important points between the three presented courses (table 1).

TABLE 1		
Case study	Role play	Business game
Real example	Social situation	Longer period
Concrete situation	Concentration on person	Matter oriented
Nonrecurring decision	Training of behavior pattern	Mathematical model

**Structure of business games**

This subsection shows the normal structure of a game. It is divided in two components. One is the scope of the management (action respectively controlling area) and one is the scope of the participants (reaction respectively simulation area). The following figure shows the relations between these two areas (figure 1).

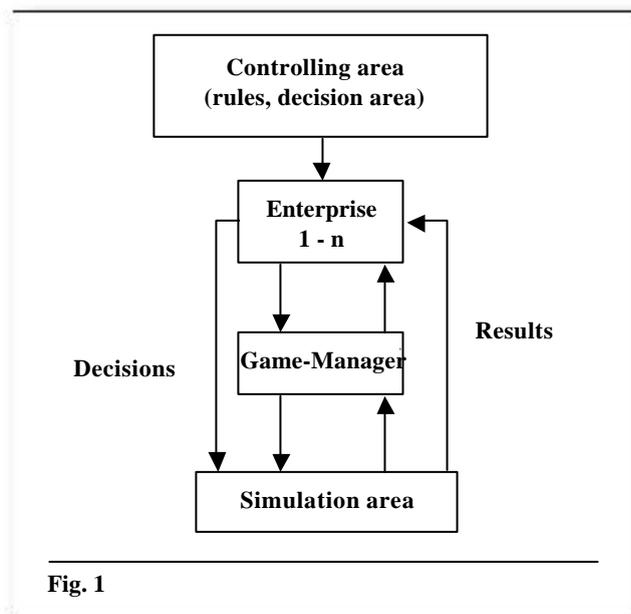


Fig. 1

**Order of events in business games**

The participants get assigned a part in a virtual enterprise. In this enterprise the group has to manage all exercises given by the management of the game. This management gives a frame of rules in which the team can act and react. The group members have to come to a decision in a given time. This decision has to be audited and an improved new decision should be delivered to the game-management. Goertzen defines this order of events as a "dynamic chain of decisions processes".<sup>2</sup> The next figure shows the ideal decision process in a normal business game (figure 2).

business purviews. But there are many other targets a business game also wants to serve. Very often business games are used to educate executives. The aim they should achieve is to learn how to react in stress afflicted situations which are problematic. In the playful situation a business game is displaying, it is easier to take on responsibility. The economically coherences get even more and more complex. To impart only the knowledge theoretically is no longer sufficient. To impart the knowledge in a business game provides learning in a very playful way and promotes holistic and crosslinked thinking.

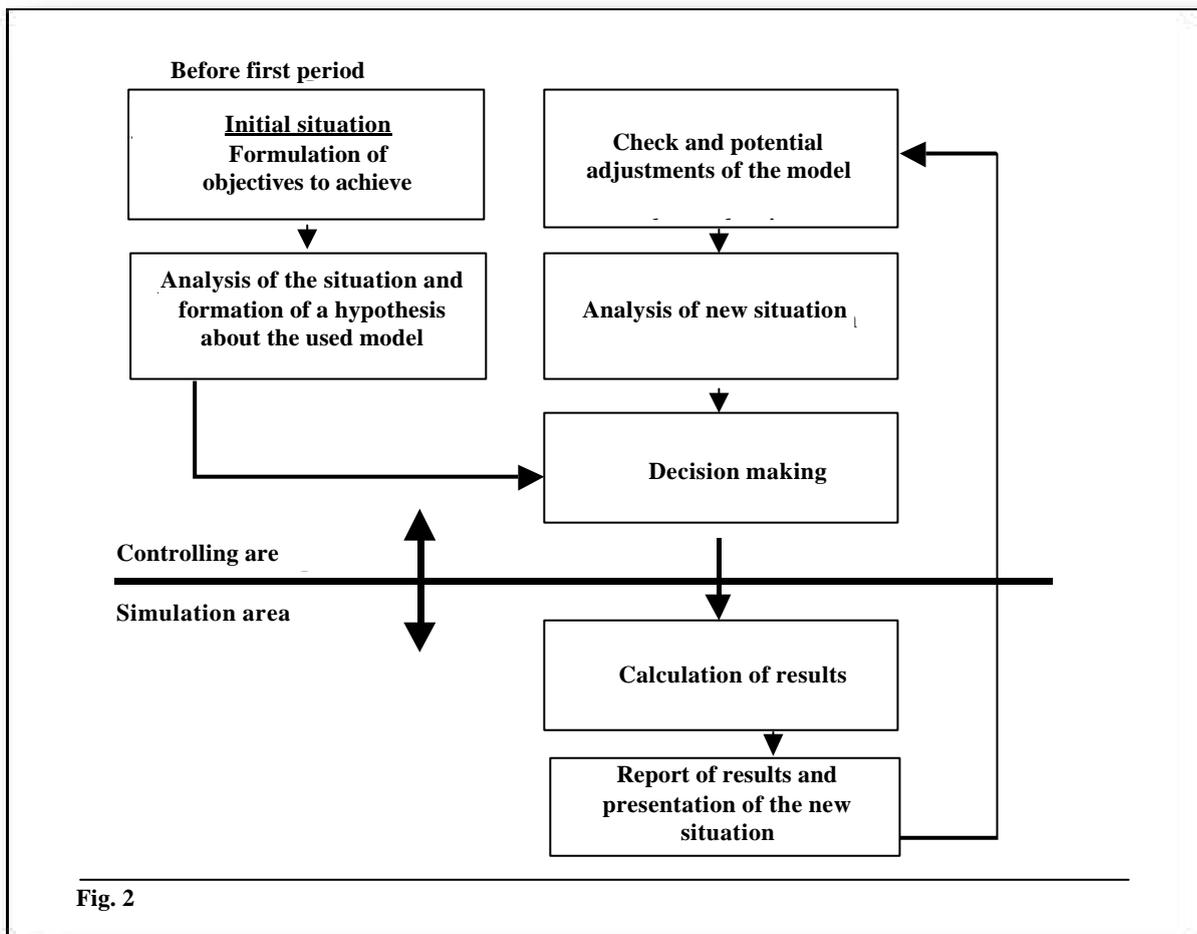


Fig. 2

This figure shows an ideal model. Most of the business use this matrix. But sometimes this work flow differs in some pieces. For example the participants very often don't form a concrete hypothesis about the model or the steps analysis of new situation and decision making are done simultaneously. Or even the workflow is intermitted by the game management to evoke stress situations.

**Sense and aims of business games**

The first aim a business game should serve is to impart knowledge like controlling, process planning, marketing or other

Not only knowledge-based aims should be achieved. Ever social-psychologic behavior patterns shall be trained. Ever management techniques like the ability to assert oneself or to react calmly in stress situations, can be imparted.

Operational exercises as an aim has been mentioned, but one aim of business games is the training of the development and the enforcement of strategic corporate goals. After these plans have been developed, the component parts of this strategy should be distributed to the several team members. Their terms of reference should be distributed, controlled and valued by the management.

Another goal that should be achieved by a business game is the training of fast and flexible reaction of short-term changing situations. Every action causes a reaction. Very often the participants of business games have to come to their decisions having incomplete informations. There are several risks left. Even the dealing with this unsureness is another goal that should be achieved. This training gets nowadays more and more important. Today the staff gets more and more self-responsibility in their daily operational work assigned. Very often the unsteady informations they get in a business game can help to train the courage to make decision on their own responsibility.

The last aim that business games should support is the teamwork. The participants in a group should have to come to a common decision in a given time. Success and failure are experienced together and can be worked up easier. In a team it is also easier to train rhetorical deficiencies and to work up criticism at the own work.<sup>2,4</sup>

## CONCLUSION AND SUMMARY

The proceeding subsections showed that business games and their related courses can be used in very different ways. To give an advice that implies a solution for every imaginable situation faced in the many ways of education is not really realistic. Many students queried in Europe say that a business game is very useful to get trained in team work or in decision-making.

Another part they emphasize after they finished such a course is the training of coherences between the single departments in an enterprise. And the training of operational work is another point of view that is very often mentioned by students or other participants of business games, role plays or case studies. It doesn't matter if you utilize such courses in education of students or of pupils or even trainees. They all can derive some benefits from participating at such a course.

The faculty of informatics at the Otto-von-Guericke-Universität Magdeburg\* has developed a series of courses that depend on each other. They use the business game IDECOR\*\* as a basis for the training in ERP-Software. The structure of the mentioned business game is used to map it in the ERP-Software SAP R/3.

Even all these suggestions are not always useful for your knowledge you want to impart. Sometimes you have to mix old and new kind of education to get the best result. But if you use the mentioned kinds of courses you and your students get very often a better benefit than only using lectures or seminars. [E]

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\* <http://www-wi.es.uni-magdeburg.de>

\*\* for further information see <http://www.idecor.de>