Serafim da Silva, Sheila; Giovinazzo Spers, Renata;
Alvarenga Oliveira, Murilo; Americo Fischmann, Adalberto
**THE STRATEGIC MANAGEMENT PRACTICE IN AN
ONLINE EXPERIENTIAL LEARNING LABORATORY**

THE STRATEGIC MANAGEMENT PRACTICE IN AN ONLINE EXPERIENTIAL LEARNING LABORATORY

[1]Sheila Serafim da Silva
[2]Renata Giovinazzo Spers
[3]Murilo Alvarenga Oliveira
[4]Adalberto Americo Fischmann

Abstract

Objective: Managing strategically is a challenge of management practice. It is important that business schools offer an education that can prepare managers to act strategically in organizations. The Online Management Laboratory is a management education model that combines virtual and face-to-face education using elements of strategic management in the teaching and learning process. In this study, we analyze the opinion of participants exposed to this model to understand its' contribution to the learning of the strategic management process.

Method: We adopted a qualitative approach with in-depth interviews with 29 participants of the model. Data processing was performed through content analysis.

Originality / Relevance: The importance of Online Management Laboratory is based on literature that identifies the limitations of traditional methods of education. A model that complements the expository method with experiential activity in online environment gives meaning to the learning of strategic management.

Results: Our results indicate that the stages of formulation and implementation of strategic management were the most applied by participants in the business game, to the detriment of the control stage. It was possible to verify that the emergent strategies were more frequent than the deliberate strategies and that the participants learned from mistakes in decision making.

Theoretical / methodological contributions: The study contributed to advances in strategic management, reinforcing that active method such as simulations and business games can be used in an online environment to promote the learning of strategic management in a dynamic and meaningful way.

Keywords: Strategic Management. Active Method. Management Education. Online Management Laboratory. Business Game.

[1] Faculdade de Economia, Administração, Contabilidade e Atuária - FEA/USP, São Paulo, (Brasil). E-mail: sheila_serafim@usp.br Orcid id: https://orcid.org/0000-0002-7104-003X

[2] Faculdade de Economia, Administração, Contabilidade e Atuária - FEA/USP, São Paulo, (Brasil). E-mail: renatag@usp.br Orcid id: https://orcid.org/0000-0003-1240-0530

[3] Universidade Federal Fluminense – UFF, Rio de Janeiro, (Brasil). E-mail: malvarenga@id.uff.br Orcid id: https://orcid.org/0000-0003-2626-551X

[4] Faculdade de Economia, Administração, Contabilidade e Atuária - FEA/USP, São Paulo, (Brasil). E-mail: aafischm@usp.br Orcid id: https://orcid.org/0000-0003-4344-9919

Sheila Serafim da Silva, Renata Giovinazzo Spers, Murilo Alvarenga Oliveira & Adalberto Americo Fischmann

A GESTÃO ESTRATÉGICA NA PRÁTICA EM UM LABORATÓRIO DE APRENDIZAGEM VIVENCIAL ONLINE

Resumo

Objetivo: Gerenciar estrategicamente é um desafio da prática gerencial. É importante que as escolas de negócios ofereçam uma educação capaz de preparar os gerentes para atuarem estrategicamente nas organizações. O Laboratório de Gestão Online, em inglês, *Online Management Laboratory,* é um modelo de educação gerencial que combina a educação virtual e presencial usando elementos de gestão estratégica no processo de ensino e aprendizagem. Este estudo objetiva analisar a opinião de participantes expostos ao modelo para saber o quanto ele contribuiu para a aprendizagem do processo de gestão estratégica.

Método: Adotou-se uma abordagem qualitativa com entrevistas em profundidade com 29 participantes do modelo. O processamento dos dados foi realizado por meio da análise de conteúdo.

Originalidade/Relevância: A importância do *Online Management Laboratory* se fundamenta na literatura que identifica as limitações dos métodos tradicionais de educação. Um modelo que complementa o método expositivo com atividade vivencial em ambiente online dá significado ao aprendizado de gestão estratégica.

Resultados: Os resultados indicaram que as etapas de formulação e implementação da gestão estratégica foram as mais aplicadas pelos participantes no jogo de empresas, em detrimento da etapa de controle. Foi possível constatar que as estratégias emergentes foram mais frequentes que as estratégias deliberadas e que os participantes aprenderam com os erros na tomada de decisão.

Contribuições teóricas/metodológicas: O estudo contribuiu para avanços em gestão estratégica reforçando que métodos ativos como a simulação e o jogo de empresas podem ser usados em ambiente online para promover o aprendizado de gestão estratégica de forma dinâmica e significativa.

Palavras-chave: Gestão Estratégica. Método Ativo. Educação Gerencial. Laboratório de Gestão Online. Jogo de Empresas.

LA PRÁCTICA DE GESTIÓN ESTRATÉGICA EN UN LABORATORIO DE APRENDIZAJE VIVENCIAL EN LÍNEA

Resumen

Objetivo: La gestión estratégica es un desafío de la práctica de gestión. Es importante que las escuelas de negocios ofrezcan una educación que pueda preparar a los gerentes para actuar estratégicamente en las organizaciones. El Laboratorio de Gestión en Línea, en inglés, *Online Management Laboratory*, es un modelo de educación gerencial que combina la educación virtual y presencial utilizando elementos de gestión estratégica en el proceso de enseñanza y aprendizaje. Este estudio tiene como objetivo analizar la opinión de los participantes expuestos a este modelo para saber cuánto ha contribuido al aprendizaje del proceso de gestión estratégica.

Método: Se adoptó un enfoque cualitativo con entrevistas en profundidad con 29 participantes del modelo. El procesamiento de datos se realizó mediante análisis de contenido.

Originalidad/Relevancia: La importancia de *Online Management Laboratory* se basa en la literatura que identifica las limitaciones de los métodos tradicionales de educación. Un modelo que complementa el método expositivo con actividad vivencial en el entorno en línea da sentido al aprendizaje de la gestión estratégica.

Resultados: Los resultados indicaron que las etapas de formulación e implementación de la gestión estratégica fueron las más aplicadas por los participantes en el juego de negocios, en detrimento de la etapa de control. Fue posible verificar que las estrategias emergentes fueron más frecuentes que las estrategias deliberadas y que los participantes aprendieron de los errores en la toma de decisiones.

Contribuciones teóricas/metodológicas: El estudio contribuye a los avances en la gestión estratégica, reforzando que el método activo, como la simulación y el juego empresarial, se puede utilizar en un entorno en línea para promover el aprendizaje de la gestión estratégica de una manera dinámica y significativa.

Palabras-clave: Gestión estratégica. Método activo. Educación de gestión. Laboratorio de Gestión En Línea. Juego de negocios.

Sheila Serafim da Silva, Renata Giovinazzo Spers, Murilo Alvarenga Oliveira & Adalberto Americo Fischmann

Introduction

The strategic management, one of the main challenges of the management practice, assembles techniques of formulation, implementation, and control of strategies that support managers in the decision-making process in organizations. More competition and above average returns are expected with the application of the strategic management in an increasingly dynamic and competitive environment (Hitt, Ireland, Camp & Sexton, 2002). In contrast, business schools must stimulate the students about the relevance of the strategic management process in the organizational performance, together with the encouragement of their capacity to develop and conduct strategic management in business. Nonetheless, the approach of the strategic management theory and the management practice is one of the primary challenges of the business schools.

Strategic management teaching is criticized for resembling a content repository and for doing little integration of theory with practice (Mahoney & McGahan, 2007). In addition, many authors criticize that there is little efficacy in strategic management (Porter & McKibbin, 1988; Mintzberg & Gosling, 2002; Jarzabkowski & Kaplan, 2015). Thus, it is observed the need for a more relevant strategic management education (Bower, 2008; Mintzberg, 2004).

Many business schools that aim interdisciplinarity still have difficulties in employing educational methods that integrate theory and practice. However, some research has shown the combination of the active and expository educational methods in the management education (Sauaia, 2013; Silva; Oliveira; Motta, 2013). The active methods are those that the educational process focuses on the student, while the expository are focused on the teacher. The experiential learning (Kolb, 1984) concerns the use of active methods that systematizes an environment that permits the individuals to practice, experiment and experience real world situations and "learning by doing." From this perspective, when the student experiences something, he can observe and reflecting upon the subjects

with enhanced depth (Pfeffer & Fong, 2012). The use of active methods in management education have contributed to the management training of students and promoted the teaching and learning processes to be more meaningful. Some researchers have evidenced the satisfactory benefits of the active methods, suggesting that the participation of students in management practice activities enhanced their realization and satisfaction status (Chang; Peng & Chao, 2014). The experiential learning was proven effective due to its innovative and dynamic aspects, together with the stimulated creativity in the students, once it generates an adequate environment for reflections around their actions.

In management, laboratories are used to integrate theory and practice with the use of organizational simulators and business games (Oliveira, 2009). In a management laboratory, the participants manage fictional companies and take decisions considering real economic indicators, while compete among themselves. Based on the precedent results obtained for their fictional company, the participants can behave aiming a better outcome for their organization. In this environment, the students usually take decisions with little or no strategic planning, without a clear mission and vision of the future and, generally, without the awareness of the internal and external corporate context in which the companies are. Once the organizational diagnosis stage is suppressed, the students set aside the creation of strategies and develop long-term perspectives for the companies. In this manner, the participants turn the decision-making process vulnerable to errors that could be predicted. Without proper strategic direction, the risk before the uncertainties of the simulated environment is higher.

In this context, this study aims to combine the strategic management education with the experiential learning to lead students to take more solid decisions and experience a meaningful learning. We developed a strategic management model based on an experiential activity in which the students will apply strategic management techniques, such as formulation, implementation, and control of the strategy. We also aim to evaluate the

opinion of the participants from the online management laboratory, regarding the contribution of the knowledge of the teaching and learning process of the strategic management.

We expect that the students will can identify the elements of the strategic management and its significance after the experiential activity. To strengthen our research, fundamental concepts of the themes that integrate this study will be presented, together with the method and procedures applied.
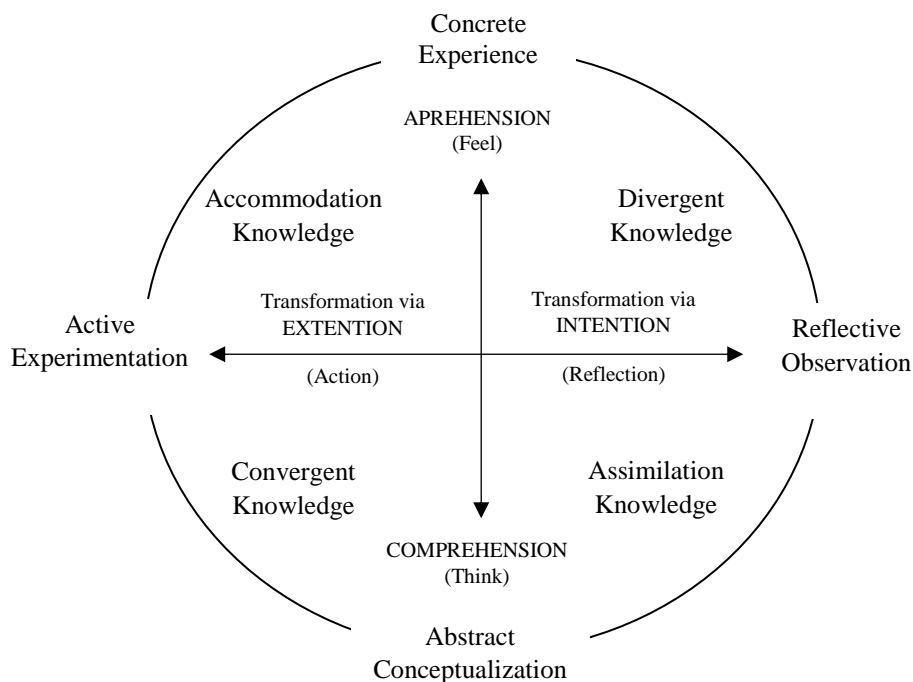
Background

Experiential learning

Dewey (1890) contributed to the educational field when discussed upon the practices of education. On Dewey's perspective, learning occurs through the experience exchange between individuals, the collectivity and the reflexive learning. Based on his theory, education plays a role beyond the transmission and reproduction of the educational content. Education must provide an experimentation and perception circumstance that enables the student to solve problems, practice the contents and test ideas to promote learning. Later, David Kolb (1984) supplemented the education theory with a relevant reflection of the individual's demand to undergo an experience or experimentation in the learning process. Kolb discussed the problem solving (1978) and experiential learning theory (1984). Both theories suggest that the educational process should highlight the students.

In addition, Kolb's approaches concern to offer a meaningful and engaging experience that can be transferred to the real world. Those assumptions suggest that the student may acquire knowledge by integrating theory and concepts taught in the classroom with the management practice (Beckem; Watkins, 2012). The traditional knowledge construction process is founded exclusively on the cognitive aspects, turning the student into a passive agent or content receptor. This knowledge acquisition is meaningful when the concepts and theories are tested in real or close-to-real settings. The experiential learning (Kolb, 1984) has been used in management education to provide a concrete experience that associates theory and practice to students. The proposal is funded by the experience in its core, which is divided into four cycles: the reflexive observation, abstract conception, active experimentation and concrete experience. In the experiential learning, the comprehension is defined as a process in which knowledge is created from the transformation of the experience (Kolb, 1984), while the individual actively enrolls in an environment to acquire knowledge, as delineated by Cannon and Feinstein (2005).

In the "concrete experience," the student is placed in a context through problem-solving activities, behavior simulation, decision-making or games. In the next step, the "reflective observation," the student starts to discuss and analyze the obtained results critically based on their experiences during the learning process. In "abstract conceptualization," the student can learn from his experience while organizes them with the aid of theoretical concepts in search of meaning. In the "active experimentation," the student may establish the interface with the real world by comparing practical situations with theoretical concepts. From then on, the student returns to the Experiential Learning Cycle. It is important to mention that the learning process does not necessarily follow this order. The structure of the Experiential Learning Cycle is shown in Figure 1.

Sheila Serafim da Silva, Renata Giovinazzo Spers, Murilo Alvarenga Oliveira & Adalberto Americo Fischmann

Figure 1 – Kolb's Experiential Learning Cycle

Some differences can be identified between the traditional education and experiential learning on the emphasis of the teaching and learning process, the roles of the teacher and student, used techniques, learning theories in which they are reasoned, focus of the process and other. These differences, pointed by Sauaia (1995), can be observed in Table 1.

Table 1 – Educational parameters of traditional education and experiential learning

Educational Parameters	Traditional Education	Experiential Learning
Didactic orientation	Education	Learning
Central character	Teacher	Student
Teacher involvement	High	Low
Student involvement	Low	High
Orientation attitude	Want to teach	Want to learn
Usual technique	Expository class	Group activity
Type of learning	Cognitive	Cognitive, affective, attitudinal, cooperative and behavioral
Enrolled areas	Brain	The whole individual
Concepts application	Theoretical	Practical
Educational aims	General and collective	Specific and individualized
Learning assessor	Teacher	Student
Class course	Stimulation from the teacher	Student's reason
Developed environment	Competitive	Competitive and cooperative

Source: Sauaia (1995).

The business game is an experiential learning method used in educational environments and management training (Keys; Wolfe, 1990; Ebner; Holzinger, 2007; Lainema; Makkonen, 2003; Faria et al., 2008). Supported by the experiential learning, the business game is grounded on constructivist principles, demanding an active behavior of the participant during the educational process.

Business games and management laboratories

In medicine and engineering courses, the laboratories are used for the conduction of experimental studies. However, in Applied Social Sciences, this practice is often not

possible. In addition, researchers have little or no access to real companies for research purposes. In the Administration field, the management laboratory is a proposal that integrates management education with applied research, being first described by Sauaia (2013). The management laboratory enables the researchers to develop applied research while they test theories and Administration tools in the same way as other science laboratories. Several applied investigations in Administration are produced within the scope of the management laboratory (Sauaia, 2013). In addition, the research in the management laboratories uses theories and performs experimental research (Sauaia; Zerrenner, 2009; Silva; Oliveira; Motta, 2013).

The management laboratory is an environment in which the students are grouped in teams to practice decision-making in a business game setting whereas they develop an applied research from their managerial experience. Different applied investigations in Administration are produced in the framework of the management laboratory (Sauaia, 2013). The business game belongs to the conceptual tripod of the management laboratory, together with the organizational simulator and applied research (Sauaia, 2013). The theoretical model of the management laboratory is displayed in Table 2.

Table 2 – Conceptual design of the Management Laboratory

Three conceptual foundations	Learning Processes	Products
Organizational simulator	Individuals assimilate economic guidelines	Mental integrated model by economic rationale
Business games	Groups experience the strategic decision-making	Dynamic, systemic and innovative managerial view
Theoretical-empirical research	Individuals study a management problem	Review, author's manuscript, monograph, thesis

Source: Sauaia (2013).

The business game is based on experiential learning principles (Kolb, 1984) in which the core of the teaching-learning process is shifted from the teacher to the student. In this procedure, the active behavior of the student is required, being possible to develop an enhanced meaningful learning. By using the experiential learning, the student is expected to be capable to "learn by doing," while he applies concepts and theories and experiences situations like a real managerial environment. In front of concrete situations, the student can observe and reflect (Pfeffer; Fong, 2002) and then take decisions that might influence the company's outcome.

The ludic aspect and the perception that the student has from his learning in the business game contribute to the learning motivation (Tao; Cheng & Sun, 2009). The use of business games in competition and collaboration environments motivate the students and, while immersed in a simulation environment, the participants can link theory and practice. Mahboubian (2010) suggests that the business simulation environment is reliable and one of its benefits is that the participants can make

mistakes without real risks. To the author, the simulation can speed up the process of teaching and learning and, when properly designed, can significantly reduce the learning time required. Other benefits of the business game can be observed in the studies of Mahboubian (2010); Tao, Cheng & Sun (2009); Keys and Wolfe (1990); Cannon & Feinstein (2005); Adobor and Daneshfar (2006), and some of its limitations can be observed in the studies of Keys and Wolfe (1990). The Online Management Laboratory (OML) model was established by Silva (2015) based on the original model from Sauaia (2013) of face-to-face management education. The online model was developed as a hybrid educational concept. In the online model, the face-to-face model, material, media and resources used are distinct from the standard face-to-face model. Besides, the online model consolidates the strategic management process through support resources and strategy control.

Strategic management process

The notions of the strategic management and planning are sometimes construed as

Sheila Serafim da Silva, Renata Giovinazzo Spers, Murilo Alvarenga Oliveira & Adalberto
Americo Fischmann

synonyms. Mintzberg (1994) defined the strategic management concept as a dynamic, systematic and cyclical process of analysis, choice, and implementation or upper management plans to achieve consistent results with the aims of the organization.

Bartol and Martin (1998) described the strategic management as a process in which the managers formulate and implement strategies considering the corporate aim adequacy. In this perspective, the strategic management consists in a sequential model divided into two fundamental sub-processes: the formulation and the implementation.

In the formulation sub-process, the mission and the strategic aims of the organization are defined, followed by the analysis of the variables in the internal and external environments that influences this organization. In this phase, the analysis of the weak and strong points of the organization are executed, together with the evaluation of the opportunities and threats in its environment. Then, strategies aligned to the corporate targets are formulated. From the necessities of the organization and the interferences of the external environment, the formulated strategies (deliberated) and the strategies arose under necessities (emergent) are put in practice. Mintzberg (1994) states that the unplanned strategies are not necessarily bad and the deliberated strategies are not usually good. It is natural that untimeliness occurs, and strategies should be continuously reconsidered and revised.

One of the leading roles of the strategic management is to support the decision-makers (managers) in the definition of an organizational mission based on the internal and external environment of the company. In this process, the alignment between the corporate aim and the environment is pursued. However, the managers should conduct the company considering the strategic management (defined route) while observing the constant adjusted external environment (unknown route) (Mintzberg, 1994). Another benefit is that the strategies concentrate the organizational effort and promote the coordination of activities without limiting the

sight of other possibilities. In addition, the organizational diagnosis unifies the identity of the organization through the strategic management.

The organizations must complete the strategic management cycle considering the modification of plans that might be controlled in concordance to the time and actions of the market. On this theme, the strategic management contribution of Kaplan and Norton (1992) (Balanced Scorecard - BSC) should be considered. The model proposed by the authors is a measurement and management methodology of the corporate performance. This model is a strategic map that describes the company's strategy through inter-related and four dimension distributed foundations: financial, costumers, internal processes and learning and growth. The BSC unfolds itself in constituents that are connected within themselves: strategic aims, indicators, and goals. From these components, the global strategy of the organization is managed. Other tools can replace the BSC, however, in this study, we adopted this perspective to complete the strategic management cycle.

The organizations should consider the strategies and tread the process of strategic management to obtain a competitive advantage. For Barney and Hesterly (2007), the company has a competitive edge when can generate higher economic value than their competitors produce. The strategic management orients the organization in relevant aspects, such as long-term organization survival, sustainable growth, adequate profitability and the innovation capacity.

In this study, the strategic management process (formulation, execution and control) will be applied in the context of the OML so that students can experience some challenges of this process in a simplified environment and practice management decision making with the support of strategic management. The quality of decision-making is very important for the manager to make robust decisions at all stages of strategic management, so it is in this study to provide an environment for the student to be taught how to practice strategic management.

In the use of strategic management in the game of companies, we seek to integrate elements of strategy such as Porter's five forces, SWOT analysis (strengths, weaknesses, opportunities and threats), the model of competitive strategies (cost, differentiation and focus) and the BSC. The integration of the various strategic elements into a complete strategic management process stimulates students' critical thinking and creativity (Maranville, 2011), seeking to fully integrate the three stages of strategic management through a practical activity.

Methods

Organizational simulator and business game

First, the students were introduced to the experiential learning theory and business game and then were presented with the rules of the organizational simulator adopted (Shadow Manager) and the dynamics format of the business game. These introductions were performed through chapters of an educational material developed with adequate language for distance education. This process occurred during a month in which the participants had free access to the content in the virtual learning environment (Modular Object-Oriented Dynamic Learning Environment - MOODLE).

Following, the decision-making behavior in the business game started. In the first session, named "experimental decision," the participants had the first contact with the decision-making process. In the next meeting, the students evaluated the results and the impacts of the decisions taken in the "experimental decision" session. After this stage, the business game started. Before the beginning of the decision-making process of the business game, the students executed a strategic planning for their companies. Then, they took decisions in the business game during four trimesters, comparable with one year of simulation. In each period, the students received the results of the previous decision. The decisions of one company influenced the others. In this way, the students could compare and discuss the results with other teams to take new decisions.

Data collection and analysis

We examined a students' sample that participated in the strategic management in the online management laboratory. After the experience of the students, we performed structured interviews with 29 participants of the experiential activity, of an important Brazilian university. The guideline of the interview was composed of three blocks: internal and external interaction between the teams, experiential learning, and applied research, as shown in Table 3. The interview script was constructed based in these blocks.

Table 3 – Authors that ground the question blocks of the script

Blocks	Grounds (Authors)
Interaction between teams (internal)	Keys; Wolfe (1990); Sauaia (1995); Ebner; Holzinger (2007); Lainema; Makkonen (2003); Faria et al. (2008); Sauaia (2013); Tao, Cheng and Sun (2009).
Interaction between teams (external)	Yang and Liu (2007).
Experiential learning	Experiential learning: Kolb (1984); Beckem; Watkins (2012); / Business games: Keys; Wolfe (1990); Ebner; Holzinger (2007); Lainema; Makkonen (2003); Faria et al. (2008); Sauaia (2013); Tao, Cheng and Sun (2009).

Source: Prepared by the authors.

Based on our collected data, three analysis categories emerged: planning, implementation, and strategy control. The sample represented about 80% of the participants from the experiential activity. The previous analysis of the collected data generated assumptions of the research, shown in Table 4. The assumptions were defined based on the categories of planning analysis, implementation and strategy control.

Sheila Serafim da Silva, Renata Giovinazzo Spers, Murilo Alvarenga Oliveira & Adalberto Americo Fischmann

Table 4 – Research Assumptions of the Study

Strategic Management Stage	Assumptions
Strategy Planning	1. Perception of the influence of the macro-environment variables.
	2. Perception of the influence of the sectorial environment (competitors).
	3. Perception of the forces and weakness of the internal environment.
Strategy Execution	4. Implementation of deliberated strategies.
	5. Implementation of emerging strategies.
Strategy Control	6. Accompanies the strategy on JE.

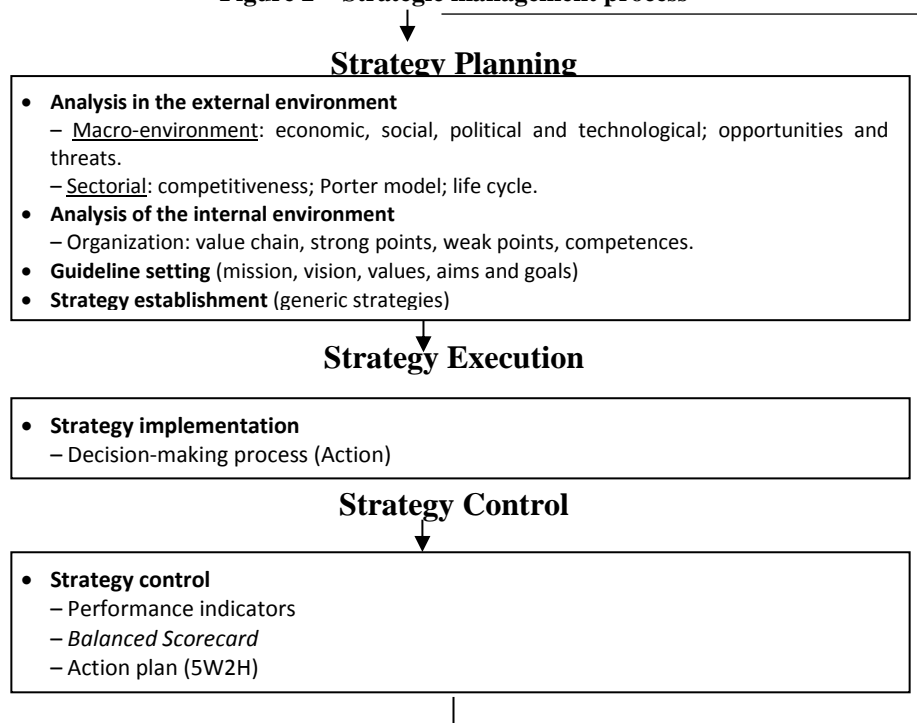The analysis of the opinion of the OML participants was made from each of these categories.

Results

Strategic management in business game

The strategic management proposal in the business game is a mechanism that enables students to build competitive advantages. The business game highlights the importance of the strategic management and its stages of planning, execution, and control. The planning stage occurs at the start of the business game before the participants make the first decision. The implementation of the plan is put into action at each period (simulation) in the business game. In this case, at each quarter, participants set goals, make predictions, and may or may not follow pre-established indicators through the Balanced Scorecard (BSC).

In the business game, as in a real business environment, companies need to create and sustain competitive edges. The participants are requested to analyze the opportunities and threats of the external environment and the strengths and weaknesses of the internal environment (SWOT Matrix). Then, the mission, the vision, values, and strategic objectives are defined. For each strategic objective, an indicator and a set of quantifiable targets. The structure of the adopted organizational simulator requires participants to interact with each other for decision-making. The students represent companies of the industrial sector and wholesalers. The activity mediator accounts for a supplier of raw material, and the organizational simulator represents the final consumer. Then, it is necessary to use technologies (computers or smartphones) to follow the lessons in real time. The strategic management process in the business game can be observed in Figure 2.

Figure 2 – Strategic management process

Strategy Planning
- **Analysis in the external environment**
  – <u>Macro-environment</u>: economic, social, political and technological; opportunities and threats.
  – <u>Sectorial</u>: competitiveness; Porter model; life cycle.
- **Analysis of the internal environment**
  – Organization: value chain, strong points, weak points, competences.
- **Guideline setting** (mission, vision, values, aims and goals)
- **Strategy establishment** (generic strategies)

Strategy Execution
- **Strategy implementation**
  – Decision-making process (Action)

Strategy Control
- **Strategy control**
  – Performance indicators
  – *Balanced Scorecard*
  – Action plan (5W2H)

In the laboratory environment, many factors may influence the decision-making of the managers, such as gross domestic product (GDP), inflation, seasonality, and government and

competitor's actions. In this way, the participants analyzed the opportunities and threats of the external environment and the strong and weak points of the company that can be associated with the structure of the company or the resources. Besides SWOT, the value chain or Porter's generic strategies can be used to evaluate the internal environment.

Each SWOT item has elaborated action plans. Some examples can be observed in Table 5, which was extracted from the educational material.

Table 5 – Action Plan Examples in Business Game

Opportunities	Action Plan
Market expansion	Increase products supply
Partnership with suppliers	Elaborate a partnership proposal with supplier X for feedstock cost reduction
Threats	
Suppliers' monopoly	Search for new suppliers in other industry
Inflation	Accompany the evolution of the inflation and prevent future variations and its possible impacts on prices and costs of the company
Strong points	
Good organizational mood	Use the good organizational mood to promote synergies in the different areas of the company
Experiences in other companies	Enhance the experience of directors in other markets by developing projects in different areas of the company
Weak points	
Low focus on the business	Revise the company's plan by aligning the guidelines with the company's strategic objectives
Lack of financial resources	Develop partnerships with other financial institutions to request resources when necessary
Increased unit costs	Elaborate partnerships proposals to reduce costs with suppliers or companies that carry out transportation

From the environment analysis, the company defines its guidelines that include a mission, vision, and values. Then, the strategical aims are set based on the SWOT analysis. These objectives must be aligned with all functional areas. For example, to boost the income, the market aim is to increment sells, the operational aim is to reduce costs, and the human resources aim is to enhance employee satisfaction.

For each strategic aim, an indicator must be defined, followed by the measurable goals. From this, the BSC is built. An example of a measurable goal is to enhance income by 10% in two trimesters (Table 6).

Table 6 – Strategy Control Practice – BSC Model

Perspective	Strategic aim	Indicator	Goal	Period $_1$	Period $_2$	Variation (%)*	Variation (%) Goal**	Status	Action Plan
Financial Perspective	Increase Income	Income (R$)	+ 20% in 3 months (5,880,000)	4,900,000	3,800,000	- 22.45	- 35.37	⬇	• Increase selling volume • Increase price
Clients' Perspective	Increase Sells	Selling Volume (Unities)	+ 60% in 3 months (4.800)	3000	2000	- 33.33	- 58.33	⬇	• Reevaluate the established goal
Internal Processes	Reduce Costs	Cost by commercial unit (R$)	- 5% in 3 months (287,85)	303	312	+ 2.97	+ 8.39	⬇	• Reduce wage • Reduce logistical cost
Learning and Expansion	Increase Employees Satisfaction	Quality Index - Mood (%)	+ 1.92 in 3 months (100)	98.08	102	+ 3.99	+ 2	⬆	• Maintain employee investments

* Variation (%) = $1 - (t_2/t_1) \times 100$

** Variation (%) Goal = $1 - (t_2/Goal) \times 100$

Sheila Serafim da Silva, Renata Giovinazzo Spers, Murilo Alvarenga Oliveira & Adalberto Americo Fischmann

The stages' linkage in Table 6 should be noted. As an example, the strategic aims established in BSC are the same from the guidelines' stages. In the same way, for each strategic objective, new indicators are set together. Columns T1 and T2 should be filled with real values regarding the period's results. In sequence, should be filled in the variations (%) of a period in comparison to the previous and regarding the goal. From the result obtained, the status may be positive or negative, and a new action plan is defined by considering the strategic aim.

The BSC aim is to guide participants on how strategies can be tracked during their decision-making behaviors. This does not mean that the strategies will be inert, but that they should be reviewed, as well as the strategic aims. The participants are able or not to execute, and the quality of the execution is not scored. Students received a spreadsheet available in Microsoft Excel Software and were invited to elaborate the strategic management of the business game. Although strategic planning is conducted by the planning director, the president, and other directors can also join the activity.

The participants' experience in the experiential activity

The results of this study are presented from six assumptions. They are divided into three large groups of strategic managements: planning, execution and strategy control (Table 7).

Table 7: Results of the Analysis of the Assumptions in the Business Game

	Assumptions of the Students in OLM	Synthesis of the Results
Planning	1. They noticed the influence of de variables in the macro-environment	The planning stage can be done through a strategic management tool. It was noted that the students formulated strategies at the beginning of the game based on indexes (GNP, inflation, etc.).
	2. They noticed the influence of sectorial environment (competitors).	The students realized that the decisions made in one period are affected by the competitors' decisions.
	3. They noticed the strengths and weaknesses of the internal environment.	Students identified the strong points and weak points within the teams, highlighting the strong interpersonal relationship as a strong point among the members to perform a good job.
Execution	4. They implemented deliberate strategies	Most of the implemented strategies in the game are emerging. Although the strategies were formulated during the game, the environment is influenced by external variables. It is then required that new strategies are implanted.
	5. They implemented emergent strategies.	
Control	6. They followed the strategy in the BG.	The students have the strategy control tool (BSC). However, the BSC is not always reviewed, either because of lack of time or because of the little importance is given to this activity.

Concerning the planning stage, it was possible to identify that the students had previously elaborated the strategic management based on the variables of the macro-environment (GNP, seasonality, inflation, among others). The students declared that OLM is more challenging than traditional teamwork, once it demands a higher rationale over the possible strategies that can be developed by the other teams (competitors).

The participants pointed out that they noticed the influence of decisions of other teams in the results.

In the execution stage, the students reported that the strategic implementation and the application of concepts and theories in real practice is challenging. Although providing a more precise vision of the company, the business atmosphere became complex as it combined diverse areas of Administration. We

observed that many formulated strategies were implemented. However, the students also performed deliberated strategies. The report indicated that an industry adopted a strategy of high prices starting from the second period, an unplanned strategic management behavior. We also noted the impact of decisions in the previous period by analyzing the reports generated by the simulator.

In the strategy control stage, it was possible to identify that students are more focused on the implementation of emerging strategies than for the control of deliberate (planned) strategies. It was noticed that little mention was made about the strategy control. This may have been due to the strong involvement in decision-making focusing on implementation and not in control. We suggest that this may occur due to the students' lack of experience with the control stage, lack of time in the decision-making process, or lack of awareness of the importance of this stage, that is only detected at the end of the business game.

Conclusions

This study aimed to evaluate the potential of active methods in the teaching and learning of strategic management process in the context of an Online Laboratory Management. We could identify the application of strategic management elements in an experience with OLM. The participants realized that the contributions of strategic management in the context of the business game would guide them in the practice of strategies. We also concluded that students could be introduced to a process of strategic management in real practice, which is one of the primary challenges of managerial education.

Among the primary limitations of the study, the qualitative approach is subject to the opinion of the participants that can change

from time to time. Moreover, the analysis of the stages of strategic management can be extended by presenting speech extracts of complete interviewees. Finally, the use of the Content Analysis through frequency should be implemented to show the relevance of each strategic management stage in the business game.

The strategic management has proved to be one of the problems of managers in the actual practice. Our study suggests that the students formulated the strategy as indicated in the educational content. However, the implemented strategies were mostly emergent, coming from timing needs and adjustments to meet long-term goals. Also, the strategy control stage was the most challenging for the participants. In general, the formulated strategies were not reviewed during the business game. The results of the absence or the low control of the strategy in the business game can incur difficulties for the company.

The active methods, such as the business game, are not able to supply all the students' learning needs. However, they present advantages about their use due to a process focused on the student and having the teacher as a facilitator of learning.

Among the contributions of this study, the use of strategic management to improve the performance of companies was highlighted, especially the strategy control that is sometimes neglected within the companies. For the academy, the possibility of using the active methods was emphasized so that the managerial students could practice the strategic managing. In addition, the participants could understand the effect of poorly formulated strategies or the necessity of emerging strategies, as well as the need to implement tools to control and evaluate the strategies and then revise them whenever necessary.

References

Adobor, H. & Daneshfar, A. 2006. Management simulations: determining their effectiveness. *Journal of Management Development*, 25(2), 151-168. https://doi.org/10.1108/02621710610645135

Bardin, L. 2011. *Content analysis*. São Paulo: Edition 70, 229p.

Barney, J. B. & Hesterly, W. S. 2007. *Strategic Management and Competitive Advantage*, Prentice Hall, (Ed. 2).

Sheila Serafim da Silva, Renata Giovinazzo Spers, Murilo Alvarenga Oliveira & Adalberto Americo Fischmann

Bartol, K. M. & Martin, D. C. 1998. *Management*. McGraw-Hill Company, 779p.

Beckem, J. M. & Watkins, M. 2012. Bringing life to learning: immersive Experiential learning simulations for online and blended courses. *Journal of Asynchronous Learning Networks*, 16(5).

Bower, J. L. 2008. The Teaching of Strategy: From General Manager to Analyst and Back Again? *Journal of Management Inquiry*, 17(4), 269-275. https://doi.org/10.1177/1056492608318149

Cannon, H. M. & Feinstein, A. H. 2005. Bloom Beyond Bloom: Using the Revised Taxonomy to Develop Experiential Learning Strategies. *Developments in Business Simulations and Experiential Learning*, 32, 348-356.

Chang, Y. C., Peng, H. Y. & Chao, H. C. 2014. Examining the effects of learning motivation and of course design in instructional simulation game. *Interactive Learning Environments*, 18(4), 319-339. https://doi.org/10.1080/10494820802574270

Ebner, M. & Holzinger, A. 2007. Successful implementation of user-centered game based learning in higher education: An example from civil engineering. *Computers & Education*, 49(3), 873-890. https://doi.org/10.1016/j.compedu.2005.11.026

Faria, A. J., Hutchinson, D., Wellington, W. J. & Gold, S. 2008. Developments in business gaming a review of the past 40 years. *Simulation & Gaming*, 40(4), 464-487. https://doi.org/10.1177/1046878108327585

Ghoshal, S. 2005. Bad management theories are destroying good management practices. *Academy of Management Learning & Education*, 4(1), 75-91. https://doi.org/10.5465/AMLE.2005.16132558

Hitt, M. A., Ireland, R. D., Camp, S. M. & Sexton, D. L. 2002. *Strategic entrepreneurship: creating a new integrated mindset*. Oxford, UK: Blackwell Publishers.

Jarzabkowski, P. & Kaplan, S. 2015. Strategy tools- in- use: A framework for understanding "technologies of rationality" in practice. *Strategic Management Journal*, 36(4), 537-558. https://doi.org/10.1002/smj.2270

Kaplan, P. & Norton, R. D. 1996. *The Balanced Scorecard: Translating Strategy into Action*. 1 ed. President and Fellows of Harvard College. p.63.

Keys, B. & Wolfe, J. 1990. The role of management games and simulations in education and research. *Journal of Management*, 16(2), 307-336. https://doi.org/10.1177/014920639001600205

Kolb, D. A. 1978. *Organizational psychology: an experimental approach*. New Jersey: Prentice Hall.

Kolb, D. A. 1984. *Experiential learning: experience as the source of learning and development*. New Jersey, EUA: Prentice Hall.

Lainema, T. & Makkonen, P. 2003. Applying constructivist approach to educational business games: Case Real game. *Simulation & Gaming*, 34(1), 131-149. https://doi.org/10.1177/1046878102250601

Mahboubian, M. 2010. Educational aspects of business simulation software. *Procedia social and Behavioral Science*, 2, 5403-5407.

Mahoney, J. T. & McGahan, A. M. 2007. The field of strategic management within the evolving science of strategic organization. *Strategic Organization*, 5(1), 79-99. https://doi.org/10.1177/1476127006074160

Maranville, S. 2011. The Art of Strategic Management: A Case-Based Exercise. *Journal of Management Education*, 35(6), 782-807. https://doi.org/10.1177/1052562910397500

Mintzberg, H. 1994. The Fall and Rise of Strategic Planning. *Harvard Business Review*, 107-114.

Mintzberg, H. & Gosling, J. 2002. Educating managers beyond borders. *Academy of*

Management Learning & Education, 1(1), 64-76.

Mintzberg, H. 2004. *Managers, not MBAs: A hard look at the soft practice of managing and management development*. Berrett-Koehler Publishers, 464p.

Oliveira, M. A. 2009. Implantando o Laboratório de Gestão: um programa integrado de educação gerencial e pesquisa em administração. 293p. *Thesis* (Doctorate in administration), University of São Paulo.

Pfeffer, J. & Fong, C. T. 2002. The end of business schools? Less success than meets the eye. *Academy of Management Learning & Education*, 1(1), 78-95. https://doi.org/10.5465/AMLE.2002.7373679

Porter, L. W. & McKibbin, L. E. 1988. *Management Education and Development: Drift or Thrust into the 21st Century?* McGraw-Hill Book Company.

Queiroz, R. T., Lobosco, A., Almeida, M. I. R., & Maccari, E. A. (2015). The Insertion of the Tool Balanced Scorecard in the Strategic Planning of a Growing Company: A Case Study in the Company Metadil Metalúrgica Indústria e Comércio Ltda. *Future Studies Research Journal*, São Paulo, 7(1), 81-112.

Sauaia, A. C. A. & Zerrenner, S. A. 2009. Jogos de Empresas e Economia Experimental: um Estudo da Racionalidade Organizacional na Tomada de Decisão. *Revista de Administração Contemporânea*, 13(2), 189-209. http://dx.doi.org/10.1590/S1415-65552009000200003

Sauaia, A. C. A. 1995. Satisfação e aprendizagem em jogos de empresas: contribuições para a educação gerencial. *Thesis* (Doctorate in administration), University of São Paulo, 273p.

Sauaia, A. C. A. 2013. *Laboratório de Gestão: simulador organizacional, jogos de empresas e pesquisa aplicada*. 3º. Edition, Barueri, São Paulo: Manole.

Silva, A. M. 2015. Jogo de empresas: ambiente laboratorial para pesquisas econômicas. São Paulo, 2015, 198 p. *Thesis* (Doctorate in administration), University of São Paulo.

Silva, S. S.; Oliveira, M. A. & Motta, G. S. 2013. Jogos de empresas e método do caso: contribuições ao processo de ensino e aprendizagem em administração. *Administração: ensino e pesquisa*, 14(4), 677-705. https://doi.org/10.13058/raep.2013.v14n4.52

Tao, Y. H.; Cheng, C. J. & Sun, S. Z. 2009. What influences college students to continue using business simulation games? The Taiwan experience. *Computers & Education*, 53, 929-939. https://doi.org/10.1016/j.compedu.2009.05.009

Yang, Z. & Liu, Q. 2007. Research and development of web-based virtual online classroom. *Computers & Education*, 48, 171-184. https://doi.org/10.1016/j.compedu.2004.12.007