Effective Use of Business Simulation Games in International Business Courses

Tim Rogmans, Zayed University, Dubai (UAE)

In the field of international business (IB) and strategic management education, the most commonly used business simulation games are browser-based multiplayer simulations. Teams of students compete against each other by managing multinational enterprises over a number of rounds of play, with each round representing a financial year. IB simulation games enable students to make decisions and receive immediate feedback in a risk-free environment.

The growing use of business simulation games in the teaching of international business is supported by several trends. Technology, in the form of high-speed internet access and mobile computer devices, is increasingly available and affordable for students. In parallel, online and blended programs have grown rapidly. Instructors are realizing that online games can bring variety and energy to the classroom compared to traditional lectures or case discussions. In short, games have the potential to motivate and engage a new generation of students who are used to working and playing online.

The supply of high quality games with relevance to IB curricula continues to grow. Instructors can now choose among a range of multi-functional games with relevance to IB, including CESIM's Global Challenge, Capsim's Global DNA, and Glo-bus, which is marketed by McGraw-Hill. In addition, a wide range of function-specific games exist in the fields of cross-cultural management and negotiation, international marketing, and international financial management. A listing of simulations is available on the AIB website.[1] Most IB simulation games can be used by students at the undergraduate and graduate level, as well as by executives.

Despite this growth in business simulation games, many instructors are still reluctant to engage in their use. In order to use games effectively in the classroom, the instructor must undergo a learning process. The aim of this article is to accelerate this learning process so that instructors can begin to use business simulation games in IB courses with a greater level of confidence and generate successful learning outcomes more quickly.

Even after several decades of accumulated experience, effective teaching practices for the use of business simulation games have not yet been researched thoroughly, especially in the IB discipline. Schreier and Bassuray (1981) observed that "research in simulation and experiential learning has, for the most part, focused on evaluation of learning outcomes, analysis of learning styles, and only to a very small extent, the behavior and attitudes of the instructor." Not much has changed since then. A search in the ABSEL journal *Developments in Business Simulation & Experiential Exercises* produces no results for articles on effective teaching practices, with most articles in this publication dealing with the development and use of individual games and their contribution to learning. In the *Journal of International Business Studies*, the only article that has simulation as a keyword dates from 1984 (Klein, 1984).

It seems that the practice of using business simulation games has outpaced research into effective teaching practices. Hence, the six suggestions for the effective use of simulation games in IB teaching in this article are derived mostly from practice rather than from academic research.

Align Game Use with Clearly Defined Learning Objectives

The most commonly used IB games can be regarded as both global strategy games and "capstone" experiences. A variety of corporate functions are represented in the decision-making elements of the game. Typically, students need to make decisions on a company's product portfolio, pricing, advertising, production, R&D, and financial structure. IB aspects of games include the management of foreign currency fluctuations, barriers to trade, differential tax rates between countries, transport costs, and international cash management. Players also need to deal with national differences on multiple aspects, including consumer preferences, price sensitivity, production costs, market growth rates, business environment, and economic growth. Instructors need to choose which decisions to emphasize, downplay, or ignore, in line with the planned learning goals of the course.

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In order to ensure alignment of learning objectives with a game, instructors should use a standard sequence of brief–play–debrief activities. In the briefing phase, the rules of the game and any required theory are explained. During play, students analyze the information they are given and make decisions. In the debrief phase, they analyze their results in a classroom setting and link the game playing process and their results back to the learning objectives of the course and to the real world of international business. This sequence can be used regardless of whether a game consists of one round or many rounds. In multi-round games, a debrief session should be held after every round

Introduce Complexity Step-by-Step

Some games are overwhelmingly rich and complex for students, particularly those in undergraduate programs. Once students feel they are lost, they find it difficult to re-engage with the exercise. In order to avoid confusion, instructors can delay the use of certain functions of the game for all students. In this way, each round of a game can have its own specific learning objectives. For example, the explanation of topics such as a company's financial structure, tax optimization, and dividend policy may be left until later in a game. The instructor may even decide to leave certain decision-making areas out for the entire game. Some games have optional modules that may be switched on or off by the instructor. By selectively choosing which decisions to emphasize, instructors can tailor the level and type of complexity of the simulation to any particular audience and the course learning objectives.

It is important that students don't feel they are losing out as a result of not knowing the basic rules of the game. Some of the more complex games offer the possibility to play practice rounds, enabling students to familiarize themselves with the game, build their team spirit, and formulate a strategy before the results start to count.

Get to Know the Game before Using It in Class

Instructors need to get to know a game before using it by consulting the student and instructor materials (documents and videos) and by playing the game before the course starts. If possible, the instructor should get to know the underlying model that is supporting the game. After having played a game, the instructor will have a better view about how to play the game in class. This insight will lead to decisions about which functions to keep in the game and, if possible, what changes to make to any of the coefficients in the model.

The instructor provides credibility to the game through explanation and guidance. If the instructor is seen to be not fully knowledgeable about the game, credibility will be impaired, student engagement will drop, and learning will suffer. The instructor is not expected to know the details of every single aspect of a rich simulation; if the instructor is lacking an answer to a question posed by students, it is best to check the available documentation or to communicate with the game supplier-before giving an answer.

Facilitate Learning

A business simulation game is an ideal opportunity to give students greater responsibility for their own process of discovery and learning, both individually and in teams. Throughout the process, but especially during the playing phase, the instructor should act as the "guide on the side" rather than "the sage on the stage" (King, 1993). Students need support, especially those who are analytically weaker than others. However, the instructor should be careful not to replace the students' own efforts and must refrain from giving inside information or specific advice on what decisions students should take. At best, the instructor can help students to think through what may be the consequences of certain decisions and link such analysis to the learning objectives of the course.

A thorough debrief after every round of play is necessary to make students reflect on their learning journey. Such a debrief starts with students observing and understanding the results of the various teams on multiple dimensions. They can then move on to explain their performance by drilling down on individual decisions they made and their consequences for the team's performance. Such discussions provide good opportunities for the instructor to link the game results back to the course learning objectives and the real world of international business.

Include the Game in Student Assessment

There are many ways to include the game in assessments that count toward a course grade. The most straightforward is to give points according to the student's performance in the game. For example, students in the winning team get 100 percent for this component of the course, the second placed team gets 90 percent, and so on. The advantage of such an approach is that the students get engaged in the game and will be highly motivated to do well. There is also objectivity, since the score of a team is determined by the software and not by the instructor.

The instructor should communicate the winning criteria at the start of the game. This may be one all-encompassing measure such as cumulative shareholder return or may combine several measures such as Return on Equity, profit growth, or market share. If the winning criteria are clear at the start, the instructor does not need to make personal judgments when declaring a winner at the end of the game.

The drawback of this approach is that competitive spirits may become too strong and inhibit an atmosphere of collaborative learning in the classroom, especially in more collectivist cultures. In addition, game performance may not always be a good reflection of learning and understanding. Sometimes the lower ranked teams have made far greater efforts, have learned more, and end up with superior understanding, as they have learned from mistakes made early in the game.

Other ways to include the game in assessments of students' learning include exams, essays, and group presentations. Exams can test

knowledge of the materials covered and can get students to apply newly developed skills. Essays and presentations typically address the questions of how the students made their decisions, what their results were, and reflections on what they learned. Learning diaries may be another way to assess the learning that is taking place.

Open up the Model to Students

Finally, it is important to discuss the assumptions and parameters of the underlying model with the students. The instructor should remember that "the model is always right," in the sense that the leading games suppliers tend to deliver games without software bugs. Whenever there appears to be something inexplicable in the behavior of the game, an explanation can usually be found, sometimes after consulting with the game supplier.

On the other hand, "every model is wrong" in the sense that a model is necessarily a simplification of reality. It is precisely by removing complexity that the learner can focus on the behavior of a limited set of variables. Discussing with students how the model simplifies reality enables them to relate their game experience to the real world.

If the objective is to learn about the workings of a system, openness about the underlying model will facilitate learning. As John Sterman of MIT Sloan wrote in his classic work Business Dynamics (Sterman, 2000):

> To learn in dynamically complex systems participants must have confidence that the model is an appropriate representation of the problem they care about. They must believe it mimics the relevant parts of the real world well enough that the lessons emerging from the virtual world apply to the real one. To develop such confidence the virtual world must be an open box whose assumptions can be inspected, criticized, and changed. To learn, participants must become modelers, not merely players in a simulation game.

Several strategy simulations published by MIT's Learning Edge allow the instructor to change the coefficients and parameters in a model. Even if some IB simulations don't provide this opportunity, instructors should discuss and challenge the apparent assumptions used in the model underlying the game.

Conclusion

In the context of IB education, learning opportunities from simulation games relate to a wide variety of topics including cross-cultural management, international expansion strategies, tax optimization, the role of import duties and transport costs, offshoring, currency fluctuations, and adaptation of products and prices to local consumer preferences. In addition, simulation games can help to build general skills related to critical thinking, systems thinking, time management, decision making, and teamwork (Lovelace, Eggers, & Dyck, 2016). Having student teams composed of different nationalities compete against each other is an exercise in international business itself.

Simulation games can be used in IB courses at three levels. In the most simplistic sense, instructors can use a simulation game to introduce variety in the class and let students "play a game", with a focus on the competitive elements of the experience. The danger of this approach is that serious concepts that are present in the game become gimmicks, students overestimate the luck factor in obtaining results, and the consequences for motivation, engagement, and learning may be counterproductive.

At a second level, the instructor facilitates learning by linking the impact of decisions made by students to the learning topics of the course. This is achieved through carefully planned briefing and debriefing, as well as by providing some support during the game play. In this way, learning can be enhanced through higher levels of student motivation and engagement.

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Ultimately, instructors need to become model builders themselves and encourage students to become so too. Initially, this is done by building a deep understanding of the functioning of the model underlying the simulation game and by reviewing (and potentially changing) coefficients of the game. The instructor then needs to open up the model to the students for discussion and criticism and link the functioning of the model to observations in the real world. Students may begin by describing how they think the model works or compare it to theories or cases they have studied. Ultimately students may offer suggestions for improvement for the model to correspond better to how they see the world. In this way, students deepen their learning about the course concepts and their applications, and at the same time they develop modeling and critical thinking skills.

In conclusion, the opportunity to integrate the use of business simulation games in IB teaching will continue to grow. Such growth is driven by the falling cost of electronic devices and internet access, the increasing number of relevant games available, and greater awareness of the opportunity to enhance experiential learning through games. Simulation games have the potential to engage students, to introduce variety to the classroom, and to support online and blended learning. Games can help students reach new levels of critical thinking and insight. Over time, instructors can tailor the use of games to design learning experiences that are specific to the needs of their students. Ultimately, opening the model up to scrutiny by the students extends learning

from the use of games beyond any specific IB curriculum into modeling and systems thinking.

The most important obstacles to further growth in the use of simulation games in IB teaching appear to be individual and institutional barriers. General inertia, combined with the initial investment required by the instructor to learn and complex purchasing procedures, are potential factors at play. This may result in instructors not willing to make the effort to select and use a simulation game. Even students seem fearful of the unknown when they are confronted with a business simulation in their courses for the first time. Encouragement and support from senior management and a willingness to invest the required time and effort to prepare for using simulations are prerequisites. Knowledge sharing between instructors with varying levels of experience can also help to overcome resistance and anxiety.

Despite recent increases in their use, there is still a great deal of potential for growth in the benefits obtained from business simulation games in IB teaching. Teachers learn to become more effective in the use of IB simulation games through experience and experience sharing. Employing the effective practices described here can accelerate the learning curve for instructors and improve the student learning experience.

References

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Endnotes

1 https://aib.msu.edu/resources/exercisessimulations.asp

Tim Rogmans (tim.rogmans@zu.ac.ae) is an Assistant Professor at the College of Business at Zayed University in Dubai (UAE). He previously worked in Strategy Consulting, Credit Insurance and Executive Education. His main research interests include Foreign Direct Investment in Emerging Markets and corporate sustainability indicators. Current research projects deal with business simulations. He holds a BSc. (Econ.) from the London School of Economics, an MBA from INSEAD and a PhD from Nyenrode University.