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Merging the Case Method and Simulation in Management Education: Is It Possible?

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Abstract: The case method and simulations are widely used in management education. Despite their generalized acceptance, these methods of teaching are commonly used as two different tools, either in different disciplines by different teachers or in the same discipline with the same teacher but during different moments. In researching the characteristics of the case method and simulations, the authors question whether these two methods could be integrated into one single tool. In this paper, the possibility and feasibility of the merging is analysed and supported. The authors call this new method "Simulations with Cases". They also believe that such a method would be an advancement in management education since it would allow students to integrate the generality of simulations with the specificity of a case. In the end, however, it is claimed that the new method would have to overcome some difficulties, since it would need to integrate sometimes irreconcilable characteristics.

Key words: case studies; simulation; business games; management education
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1. Introduction

By and large, teaching and learning methods can be disposed into two poles: on the one side, there is the professor-centered method in which knowledge is a commodity and it is the responsibility of the teacher to transfer this commodity to students' mind. Students are seen as "empty vessels" to be filled with accumulated cultural knowledge. In its main locus of occurrence—the classroom—this method is totally dominated by the teacher. He plans and conducts the activities, poses questions, decides what solution is best to problems, and assesses students based on what he has delivered. This prevalent traditional method in education makes students passive listeners. Currently, new ways of knowledge transmission make use of information technologies, such as in online programmes.

On the other side, there is the student-centered method. In this view—although students are considered novices in the field of studies they are undertaking—they are not seen as "empty vessels". It is believed that they come to the learning experience with a cultural package and a natural disposition. In such view, students are expected to be agents in the pursuit of knowledge. Therefore, methods in this view are also mentioned as active. Teachers are expected to step aside and give support to students' pathway to sense making. The assumption is that students learn better by doing.

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In business education, Doran et al. (2001), Apud Sciglimpaglia & Toole (2010) state that programmes "have come under fire for being too passive, for possessing too many artificial boundaries between disciplines, and for being too teacher directed. [Therefore, business education urges for] significant improvements to increase the relevance of what is taught and to improve the quality of graduates" (p. 68). These improvements call for active learning methods and interactive learning environments.

However, the active model of teaching has also been under attack. Shugan (2006), for instance, argues that "great teaching requires great content, in addition to active learning" (p. 109). Although active learning methods have been increasingly used in management and business education, Goodyear (2000) claims that management education is an instance of a complex knowledge field which needs "constellations of different kinds/types of knowledge" (p. 10) and, therefore, of teaching and learning methods—in order to be sensibly approached. With regard to active methods, teachers have now dozens of choices. Among them are the case studies and simulations.

In this paper, the authors make a claim. They hypothesize that the case method and simulations could be merged into one single learning method. They name this fusion *"Simulation with Cases"*. Therefore, the case would be part of the simulation, affecting its results. Before discussing this possibility of merging, the text will describe some of the features of the case method and of simulations and look at some literature comparing these two methods. This is followed by arguments in favour of the merging and, finally, the anticipation of some difficulties the proposal may encounter.

2. Simulations, Business Games or Management Games

Simulations, business games, and management games are considered different concepts in the training and education literature. For example, Jones (1989) defined simulation as "a non-taught event in which the participants have sufficient information to enable them to behave with professional intent according to their roles" (p. 12) and differentiated simulation from games. In games, he states, it is necessary to have clear rules to prevent cheating. By contrast, "in simulation participants can go on strike or cheat or lie or steal and remain with the event, providing they are behaving with professional intent" (Jones, 1989, p. 14) and consider the future consequences of their acts. Babb (1966) defined business games as "decision-making exercises in which teams compete in satisfying specified objectives" (p. 466). In the same vein, Taylor and Walford (1972) defined simulation according to three aspects: (1) role-players' acts and decisions they make are based on the setting in which they find themselves; (2) decisions generate consequences and; (3) role-players act again based on their reflections on the relationship between their decisions and consequences. In this text, however, simulation, business games, and management games are treated interchangeably.

Although they may have other uses, for example, in research (Bowden & Hall, 1998; Dooley, 2002) and in assessment (Neely & Tucker, 2012), in this text the interest lies on simulations and games as instructional methods in management education to convey how a business model operates. Therefore, a model of what is being simulated is essential.

Despite their success and their indiscriminate use, management games and simulations have also been criticized. Mintzberg (2004), for instance, argues that management games and simulations "only compound the problems created in other courses, by giving the impression that managing is far more orderly and analytical than it really is" (p. 44). Additionally, in reviewing the literature, Lean et al. (2006) found that educators face several barriers to the use of simulations. They cite, for example, preparation time, poor fit with the courses being taught,

lack of information about the method, limited class time and extensive amount of time required to use the method, administrative and technical issues and funding.

3. The Case Method

The case method (also referred to as case studies or teaching cases in the literature) "is the most used approach outside the traditional lecture/instructional format" in management education (Burgoyne & Mumford, 2001, p. 5). A standard definition of the case method is given by Booth et al. (2000): "[it] simulates a real incident or problem which the student is asked to 'solve' in the safe environment of the classroom" (p. 64). In general, as Tripathy (2009) puts, "case method is a form of qualitative and descriptive research; it looks intensely at an individual, a group or event and draws conclusions in a specific context" (p. 660). However, authors have used the concept in a variety of ways both in theory and in practice. With regards to the format, for example, Heath (1998) defined six different types of cases; ranging from the "incident case", a very short single event, — even end-of-chapter exercises may be considered cases—to the "complex and decision case" in which students deal with a mass of data and have to formulate action plans.

Operationally, the case method has a simple structure which could be summarized in three moments:

(1) A text is presented to students containing the situation, a problem, and a set of data which they have to read in advance to class;

(2) A class discussion is undertaken, in general with instructor intervention posing questions and encouraging participation;

(3) A tentative summary or generalization is made or a solution to the problem is searched to convey the learning objectives.

Nevertheless, the purpose and the curriculum context, in which the case method is inserted, should also be considered. Case studies may have many purposes. In legal cases, for example, the purpose of a case study may be related to problem-solving or decision-making in which the right solution contained in the case may inform later actions. In legal system, this principle is known as *stare decisis*, a situation where precedents guide subsequent legal decisions (Shugan, 2006). Accordingly, in business education, a case resolution would help students to find answers in similar problems in the future.

In the same way, cases may be inserted in many different curriculum contexts. They may be used simultaneously with a functional discipline—finance, marketing, or human relations, for example—or in a capstone course at the end of the programme.

But there are also criticisms to the case method. Burgoyne & Mumford (2001) state that in the case method "theory is absent, nor is there any model describing how and why the process work in learning terms … [and also that] … there are practically no references to the significance or extent of preferences by individuals of how they learn" (pp. 41-42).

4. The Literature Comparing the Case Method and Simulation

In this section, attention is paid to literature which relates or makes some kind of comparison between the case method and simulation. For instance, the 2003 survey from Industry Report found that case studies were *often or always* used by 40% of the respondents and computer-based games and simulations were *often or always* used by 10%. Conversely, 60% of the respondents answered they *never or seldom* used case studies while those

who *never or seldom* used computer-based games and simulation were 91% (Industry Report, 2003; apud Summers, 2004, p. 211). That means that case studies are much more widespread than simulation; and also that jointly the two methods account for 50% of all the methods *often or always* used by teachers.

In another study, Richardson (1994) interestingly categorizes cases, and among the categories he mentions what he calls *the Case Simulation,* "which involve[s] students participating in 'events' which are designed to closely replicate real-life experience" (p. 4). Although the author does not go further into the description of this type of case method, it seems that it is a mix of role play and simulation in which some people play "real-world" roles, make interventions, and input new information.

In revisiting the literature, Baugh et al. (1998) found studies, for example, Estes & Smith (1979), Kaufman (1976), McKenney (1962; 1963), Raia (1966), and Wolfe & Guth (1975), which considered simulation superior to the case method on a variety of performance measures, although there is no consensual agreement in the literature.

Larréché (1987) also calls attention to the fact that, in some professional areas, "knowledge is a means to an end but not an end in itself" (p. 561). In those areas, performance in the task is what matters and education has failed if this end is not achieved. For this purpose, the traditional way of knowledge acquisition (reading and lectures) are important, but not sufficient, believes the author. Therefore, in those areas, learning methods like cases and simulations should be used "to bridge the gap between knowledge and action" (p. 561). He also acknowledges that simulations go further than cases because in simulations students have to make sequential decisions which affect their resulting outcome in the exercise.

In the same vein, Kibbee et al. (1961) observes that games and simulations have two factors differentiating them from the case-study approach: (1) the objective feedback and; (2) a new use of the time dimension. The objective feedback refers to performance reports generated by input decisions taken by participants. In simulations and games, contrary to case-studies, there are real competitors—the other teams. Therefore, students react to actual events and, subsequently, the performance reports they receive reflect these actual events, not hypothesized situations as in case-studies.

A new use of time dimensions refers to things like "the severe time limitations to simulate the stress encountered in a real managerial situation" and the consideration both of the "present and [of] the future simultaneously. With no other teaching technique has it been possible to demonstrate so vividly the effects of sequential decision making in a business environment" (Kibbee et al., 1961, p. 42).

In 1993, Li and Baillie already defended a joint use of simulations and games. As they say, "by using a successful combination of case and game methods, more learning benefits can be attained than when using the cases or games alone. It is this mixed pedagogy that we strongly support" (p. 344). They report on a research study where they asked students, among other things, to analyse five cases and to also play a business game. They conclude that "cases and complex games play a similar role in the business policy course. They are tools to facilitate student learning through a realistic model of real-world business and should be used to supplement each other" (p. 350).

Nevertheless, the most extensive study drawing comparison between the case method and simulation is that of Mitchel (2004). Mitchel notes that "some professors and researchers prefer case discussions over simulations; some prefer the converse; and still others advocate an integrated mixture of both" (pp. 198-199). He undertook an interesting study where he investigates the combining use of case studies and simulation in strategic management courses and how this affected student performance. In his experiment, Mitchel tested two courses designs, one in which students read the cases as homework and discussed them later in the classroom (the traditional format) and the

other in which half the cases were replaced with a computer simulation. The data showed that "among students using the two courses designs (with and without a simulation), there is no difference in performance" (p. 203) and that each method has particular strengths. For example, cases are more appropriate when the course objective is to make students learn about major conceptual concepts and models in the field or when the objective is to assess individual student performance and simulations are better to make students experience "more realistically the role and responsibilities of a top decision maker ... [and to promote] ... student emotional arousal and involvement" (p. 203).

In comparing both methods, Mitchel claims that case studies and simulations have similar advantages. Both:

- Encourage critical thinking;
- Require thoughtful reasoning and analysis;
- Improve decision making;
- Present complexity and ambiguity, similar to real-life situations, in which there is seldom a single "correct" answer;
- Involve active/experiential learning;
- Facilitate skill transfer to work settings by supplying contexts built on existing knowledge;
- Integrate various courses and topics into an interdisciplinary framework, allowing better application in the future;
- Enhance interpersonal relations, learning, and teamwork experience;
- Require involvement as a participant rather than a neutral observer; (Adapted from Mitchel, 2004, p. 199.)

The author concludes that both methods have value and "that a flexible combination of the two" (p. 200) is the most appropriate because "no one learning method is able to provide all the knowledge and skills required" (p. 199) to teach students to be managers.

5. Is It Possible to Merge the Case Method and Simulation in Management Education?

Creativity does not only mean creating new products and services, but also discovering new utilities for existing products and services. Wondering about the similar characteristics of the case method and simulations, the authors of this study hypothesized that the two methods could be integrated into one single tool in management education. They looked into the literature to find support for their hypothesis. Despite the best of their efforts, they could only find Mitchel's (2004) and Li and Baillie's (1993) proposals which, as previously discussed, used the two methods in a discipline, yet separately.

Despite the lack of literature on the question, the authors propose that such merging is possible and useful. They note, however, that due to the novelty, the proposal may find some initial resistance. Novelties are not welcomed, especially in very traditional environments. Santos & Martins (2012), for example, describe their frustrated attempt to set up a management learning laboratory in their university and credit their failure to the influence of what Parlett (1977) called "the learning milieu" and also to what Snyder (1971) called "the hidden curriculum." Both concepts draw attention to features and expectations that surrounds the learning experience—both for students and teachers. Santos and Martins concluded that the constraints imposed by the learning milieu and the hidden curriculum in their experience "were silent, but mandatory" (p. 738).

However, the proposal of *Simulation with Cases* may not encounter such problems because the case method and simulation—each method considered individually—have already been part of business schools routine for years. They have been integrated into curriculum programmes and, even where they are not, the resources and

conditions they require to run—especially in the case of simulation, like computers and specific software—are no longer an embarrassment to management schools. As Lean et al. (2006) put, scholars who are simulation supporters are generally not intimidated by difficulties they may encounter in using the method. They make their decision to use simulations and games "based upon their professional judgement of benefit and risk" (Lean et al., 2006, p. 239) of the technique.

Therefore, if the *Simulation with Cases* method is to be used, the question is to find the justification and the model by which academics would feel comfortable and secure to do it. The following are some of these reasons:

(1) Both Methods Are Active

Both simulation and case method can be characterized as active methods, since active learning methodologies require students to perform activities in the learning process. They require students to do things instead of listening to stories about someone else's deeds. They also demand less intervention from the teacher, who abandons or greatly reduces the amount of direct instruction. Teachers take on the role of facilitators instead, allowing students "to make their own decisions, which include making their own mistakes" (Jones, 1989, p. 7). Case methods and simulations share these characteristics. However, individual and isolated actions are not sufficient. It is necessary to understand how these activities integrate into students' conceptual map and how this may affect their future performance. Argyris and Schön (1974) states that studies looking for the integration between thought and action in educational development are an intriguing and exciting puzzle, demanding a body of competence very rare in scholars. The authors add that "the few hardy souls who plunge into cross-disciplinary waters find that their colleagues view the effort with scepticism" (p. 3). However, the integration between thought and action is needed if management education hopes to contribute significantly to student learning.

(2) Both Methods Require Participation and Cooperation

Business is a cooperative task. There is no such a thing as a one-man organization. In this way, management learning should emphasize team cooperation and team learning. This reports business education to social theories of learning–social constructivism, for example–in which learning is defined as a social construction of knowledge (McCormick & Paechter, 1999). Social constructivism emphasizes the historicity, the context-dependence, and the socio-linguistically quality of all matters concerning human activity (Hibberd, 2005), including learning. In this view, knowledge contents are not isolated objects and are not derived out of thin air. They are derived from human sharing and participation in a specific culture and through cooperation in many ways. Therefore, in the learning experience, teachers should recognize, as Dewey (1910; 1991) put it, that the outcome of the learning experience is affected by the individual traits (nature) and by the entire environment (nurture) as well. In this sense, history and the process of development of cultural life are important features to the understanding of learning.

A further argument for a social conception of learning is that learning is also situated within specific communities where individuals are constructing their selves (Wenger, 1998). According to Wenger (1998), the focus of a social theory of learning should be on social participation where participation means not only taking part in communities of practices, but also constructing identities in relation to those communities. Learning, as a social entity, should recognize that humans are social beings, searching to experience the world in a meaningful way. To achieve that, humans engage actively in several enterprises in the world, trying to acquire competence with respect to those regarded as valuable. Learning methods as cases and simulations may produce the climate for that, should the sessions be appropriately conducted.

(3) Both Methods Are Group-Oriented

One common characteristic of both methods is that they are group-oriented. Although research on group

activity has a long tradition—from Roethlisberger & Dickson (1939) to Tuckman (1965)—Boot & Reynolds (1997) note that "the design and application of groupwork for educational purposes seem rarely to have been informed by group theory" (p. 90). In fact, the use of group concepts by cases and simulations practitioners often seems instrumental and never reveals the theoretical basis on which groups are formed and operated.

Therefore, there is much to learn with regards to groups in both methods. Firstly, there are the constitutive issues, very often treated carelessly by tutors. Secondly, there is the communicative interaction which is a crucial skill required in any organizational setting. Organizations may be seen as a flux of communication (Cooren & Taylor, 2006). Thirdly, there is the leadership issue and, related to that, issues of task division and coordination. Additionally, issues as cooperation and conflict, norms of conduct and evaluations are all also possible to be treated in cases and simulations.

(4) Both Methods Are Already Institutionalized

Finally, both methods have already been integrated into business schools curricula. That means they have already been part of what business schools accept as viable or without much disruptive action into the programme. In this way, both can easily be scheduled as part of one capstone discipline or even as a singular programme; both can be conducted as in-class activities and by one teacher. There is not so much to worry!

6. Anticipating Some of the Difficulties of the Proposal

While some literature provides support to our hypothesis, other texts would anticipate difficulties should the proposal be considered to become real. For example, Grisoni (2002) notes that "political decisions, resource constraints, limited student and staff time/courage/competence militate against extensive use of experiential learning as a viable teaching and learning strategy" (p. 40). Additionally, critics have appointed some flaws both in case studies and simulations. Some of these flaws are inevitable and their impact would have to be considered if both methods are to be rearranged to work together. The following aspects are worth citing:

(1) Both Cases and Simulations Are Not Real Experiences

Learning methods that try to mock reality up will always suffer from inferiority complex. Reality is too complex and the simple attempt to imitate it reveals how impotent one feels in the face of it. At most, cases may be considered dead reality since they refer to things that already happened. In such situation, students may always have the opportunity to know exactly how real managers in fact performed in the actual situation and which consequences aroused from their actions. In the same way, in simulation, reality is constrained by presumptions of cause-effect embedded in its internal algorithms. For that reason, students do not react to reality itself, but only to experts' presumptions entrenched in the simulation.

(2) The Difficulty of Assessing Students

Assessing students is a debatable issue in the educational literature. According to Rowntree (1977, cited in Lucas, 2001), "assessment is possibly the most important of all the contextual variables that might affect the approaches to learning adopted by students" (p. 181), because, implicitly or explicitly, students perceive what the course is really expecting from them by the assessment system in use.

Assessment systems depend on three factors at least: (1) institutional requirements; (2) learning objectives or the type of skills students are hoped to achieve; and (3) the teaching style. Institutional requirements refer to things teachers are obliged to do, for instance, they may be obliged to assess students by giving a grade instead of simply a pass/fail mark. The implicit or explicit learning objectives are also important to understand the

assessment system. In institutions where teachers may have a choice on how to assess students, they may guide the assessment system by the course learning objectives. In academic subjects, for instance, teachers are more prone to apply written and formal evaluations, while in professional and practical courses a more practical assessment system may be preferable. Finally, teachers may have their own favorite style of assessment. There are those who may favour individual, content, and objective assessment measurements. On the contrary, others may prefer team, skill, and implicit evaluations. All these variables guide the kind of assessment being actually used.

Assessments in case method, for example, may be individualized or in groups, written or oral. But they always rely on what can be inferred from the data available. Beyond that and more importantly, although the student's evaluation must be grounded in theory and accurate, it is not necessarily the decision s/he would take if in the decision maker's position. How come? Maybe because in classroom, assessment is made based on authoritative knowledge which students tend to forget as soon as they leave the oppressed learning environment.

In simulations, assessment is also problematic. Although Neely & Tucker (2012) claim that business simulations may be used to create authentic assessments, it is also true that, in simulations, success and great team's outcomes may not be directly related to students' understanding or students' grasp of the learning objectives. Other team's decision and even luck may influence the result. Therefore, what would the proper use of assessment in the *Simulation with Cases* be?

(3) Team's Closure and Disclosure of Information

Cases and simulations differ completely in, at least, one aspect. This is in the way each group treats data. In cases, students are not concerned about discussing data and issues presented in the case with others. They spontaneously share information and data they have. In fact, they are required to do so in the class discussion about the case. To that extent, there is no competition involved. They may even be marked by their expertise of mining gold from the sea of data and their oral competence of arguing their point of view.

On the contrary, in simulations, groups should retain the information privately because they are an important component of the team's strategy to play the game. The possession and exclusivity of the right information may have a huge impact on the simulation outcome—a case of do or die. This may be seen as more realistic, but it could make us think what education is for. Shall one privilege competition over cooperation? A learning method which would incorporate both approaches would have to deal with this dilemma.

7. Conclusion

Nowadays, educational technology in management education is varied. Nevertheless, the more choices teachers have the more complicated it has been to choose and apply the most appropriate method in the classroom. Is it not about time to look for integration in teaching methods? This paper proposes that the case method and simulation could be merged into a specific tool in management education in order to create a more organic structure to teach management. This new instrument was called *Simulation with Cases*. Since this is a theoretical study, the authors tried to show the cons and the pros of the proposal. Some of the cons are: the unsustainable attempt to mock reality up, the difficulties of securing an assessment system which captures the cognitive and the behavioural aspects of learning, and also the nature of how each method treats available information. However, the authors have shown that both methods have many features in common which would recommend the fusion: both methods are active, experiential, require participation and cooperation, are group-oriented, and have already been institutionalized in business schools. Despite the difficulties the proposal may encounter, the authors are

currently working in a model to merge the two methods, but this is an issue for another paper.

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