

# DESIGN OF A SERIOUS GAME TO TEACH ORGANIZATIONAL ETHICAL LEADERSHIP

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## ABSTRACT

*An essential element for development of organizations is to identify the necessary leadership to grow and sustain. In that sense, literature on leadership describes that this is a temporary condition of people, in which certain skills and competencies are displayed. The role of the ethical leader is essential in organizations, more in times of crisis. Consequently, it is important to encourage virtues of ethical leadership in current and future leaders using tools such as the design of serious games. This paper, exposes the basic concepts of ethical leadership through a pedagogical methodology, a serious game that starts from a theoretical frame of reference and selection criteria, which generates opportunities for teaching ethical leadership as a scientific method complemented with fun.*

## INTRODUCTION

Poor management of some leaders is the beginning of almost all business failures. Weak leadership will make the heart of the organization fragile, until it breaks down (Santos, 2010). Organizations depend, to grow and endure, of the leadership that leaders apply with other people. A good leader must meet four conditions; commitment to the mission, communication of the vision, self-confidence and personal integrity. The leader must comply with these conditions, must also capture certain virtues that will guide him in making decisions. These virtues are prudence, temperance, justice and strength. Leadership according to Noriega (2008) is a process of interaction between people in which one of them leads, through personal influence and power, the energies, potentialities and activities of a group, to reach a common goal in order to transform the company and the people who collaborate in it.

In summary, leadership is important as it is vital to the survival of any organization. It is important, because it is the boss's ability to guide and direct. An organization can have an adequate planning, strategy, control, indicators, among others, and not survive the lack of an appropriate direction, an appropriate leader, even such an organization may lack action plans, but having a committed leader can achieve organizational objectives.

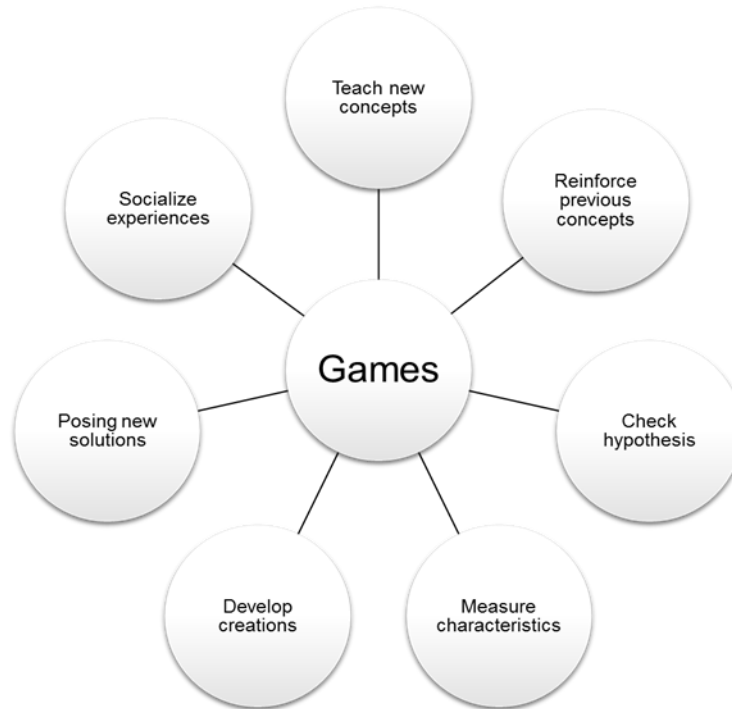
On the other hand, ethics and morals are aspects of concern in the organizational world, mentioned as examples: international concern about events that have taken place in governmental spheres in most countries of the world and the emergence of a ranking at the international level. International corruption where statistical criteria measure the level of organizational confidence (Brito, 2016). It is important to promote responsible ethical behavior based on leadership to develop the new leaders of the future.

Ethics is a determining factor to successfully develop organizational leadership, the leader's ethics exercises employee behavior where positive results will be seen. In other words, the example provided by the leader to followers will have a fundamental reaction effect for the achievement of common and individual goals. The ethical dimension of leadership has received attention from the scientific community until recently. In fact, it is infrequent to find explicit references to ethics in the specialized literature on leadership (Ruiz, 2014). This reflection leads to the posing of a series of questions regarding ethical business leadership: what is it to be an ethical leader? What qualities prevail in this type of leadership? What does the ethical dimension imply within current organizations? Is it optional or a necessity?

Management games have been developed over the last few years, quickly becoming an important and useful tool for staff training in organizations, to teach and introduce new skills or knowledge and to reinforce some concepts in students and workers (Janodia, Sreedhar, Ligade, & Udupa, 2008). Games have become a tool for training and analysis of working groups in relation to the desirable skills and behaviors about human talent (Rojas, Londoño and Alis, 2016). However, the opportunity identified is to design a game focused on developing and reinforcing the concept of leadership at the individual and organizational level, which allows individuals to identify ethical behaviors related to the leadership of people and organizations around them, or to teach the application of virtues of a desirable ethical leader in making interpersonal or group decisions, which lead to acceptable ethical behavior in

society. According to Gómez (2010), games have at least one of the purposes detailed in exhibit 1.

## EXHIBIT 1 PURPOSES OF EDUCATIONAL GAMES



Prepared from Gómez (2008), Lupano and Castro (2008).

## THEORETICAL FRAMEWORK

The most relevant definitions and concepts of leadership are evaluated, as well as identifying the particularities of organizational ethics and the relationship with leadership focused on the main characteristics they share; later, more important concepts and particularities of serious games are shown as an organizational learning tool.

The first empirical investigation of leadership was published in 1904, the main initiatives in this field occurred during the First World War, whose interest was to recognize the characteristics of leadership and the way men ascend to managerial positions (Fiedler, 1995). Different authors designate the leadership according to the experiences and studies, all have certain points in common (Ruiz, 2014). Robbins (1999) defines leadership "as the ability to influence a group towards the achievement of a vision or the establishment of goals"; leadership is interpreted as the ability of a person to influence the way of working of a team of individuals.

Lupano and Castro (2008) indicate that: "leadership can be defined as a natural process of influence that occurs between a person - the leader - and his followers". Another concept about leadership is provided by Rowe (2001) where he details it as the ability of an individual to contribute positively to the members of a team so that they are able to make the best decisions for the group, since they depend on them the fulfillment of objectives. In conclusion, leadership is an essential function that depends on communication and motivation.

Situational or contingent perspectives recognize that the traits and behaviors of the leader act in conjunction with situational contingencies. Since according to the situation in which the leader unfolds, he will need to have a relevant trait or behavior, which will depend on the situation in which he is. Finally, the new leadership perspectives developed by Bass and Riggio (2006) focus on transformational leadership and transactional leadership.

Organizational ethics arises from the need to rescue the trust of organizations in cases of scandals that generate lack of credibility, the obligation to make long-term decisions and responsibility, this turned organizational ethics into an instrument to recover the community in front of the institution (Cortina, 1994). Organizational ethics can be considered as a set of cultural practices that seeks to develop transparent, fair and equitable relationships, seeking to develop an environment of trust and collaboration

For Debeljuh (2009), ethics has to do with the person, what is really thought, has to do with principles. Thus, in the management of organizations, ethics is governed by principles that are put into practice and thereby ensuring the success of work processes. On the other hand, ethical management is governed by values; an ethical value or virtue, at least: build trust and credibility

Throughout the years different theories of leadership were developed. Some extol the features of the authentic leader, others

discuss the behaviors that every leader has or the different situations that make a person leader, but all agree that leadership must include vision, mission, coordination and change. Ethical leadership, which resembles in certain aspects transcendent leadership. Yarce (2008) affirms that with a leadership based on values, organizations in general seek, in addition to the profits or economic benefits, a growth of human capital and that the social environment benefits directly, making these organizations ethical. Otherwise, it would be immersed in a mechanistic vision of the company, reduced and biased.

Ethical principles provide the guidelines of order; They include duties focused on a moral philosophy to model behaviors with facts, as well as the development of human potentials conducive to happiness, pleasure, duty and virtue. According to García (2000), ethical reflection confronts people in a world of principles, such as: responsibility, honesty, transparency, commitment, respect, tolerance, loyalty, integrity, order, trust, security, cooperation, quality and loyalty, among others more. Under this premise, in an academic organization it is necessary to make the legitimate interests of the parties involved transparent from the actions of leaders. Ethical organizations are reflective, when they become aware of the problems of their own functioning, their contradictions and internal enemies; they do not hide their limitations, but they debate them until they find points of coincidence. Rocafuerte (2016) supports this belief and complements it with the idea that all this must be based on virtues, which will mean small but essential changes in the concept of leadership. Exhibit 2 shows each of these virtues.

## EXHIBIT 2 VIRTUES OF ETHICAL LEADERSHIP



Prepared from Calzadilla (2009)

The conception of the term Serious Games, born with Clark C. Abt in the book "Serious Games" proposed in 1970, which defines a term similar to that used today (Djaouti, Alvarez, Jessel, & Rampnoux, 2011). In this order of ideas, for the full term there are also several definitions. Marcano (2008) defines it as applications whose main objective is training rather than entertainment. It is essential to clarify that the serious adjective refers, in general, to products on issues of military defense, education, scientific research, health care, emergency management, urban planning, engineering, religion and politics. " For his part Zyda (2005), defines it as a mental test with specific rules, which uses fun as training, with objectives in the field of education, health, public policy and strategic communication.

Serious Games create motivating learning environments that allow learners to safely experience real-world problems or situations through simulation. These Serious Games facilitate the construction of knowledge and the training of certain skills (López Raventós, 2016). The Serious Games are a type of strategy that combines a playful quality with an educational agenda in a broad sense (Morales, 2015)

Serious games are developed in recent years, quickly becoming one of the training tools at the organizational level and in important universities. Since 2006, the generation of serious games has increased considerably, becoming a trend as a tool to develop teaching strategies in a friendly environment. The market for these games is wide, highlighting in areas of education, advertising, ecology, corporations and medical, in the that learning mechanisms are developed with appreciable results. (Djaouti et al., 2011).

## METHODOLOGY

Based on the methodology proposed by (Gómez, 2010), the design of the Is-LEAD game is established. Exhibit 3 shows the stages of the methodology to be used:

### EXHIBIT 3 METHODOLOGY FOR GAME DESIGN.

| PHASES | DESCRIPTION   |
|--------|---|
| 1      | Identify the theme of the game  |
| 2      | Set the purpose of the game   |
| 3      | Set the instructional objectives of the game                                    |
| 4      | Identify and define general concepts of the subject                             |
| 5      | Select the candidate techniques   |
| 6      | Select the appropriate technique, according to the characterization of the game |
| 7      | Incorporate specific knowledge into the game                                    |
| 8      | Develop game pilot sessions   |
| 9      | Develop the final version of the game   |
| 10     | Prepare a survey for the evaluation of the game                                 |

From Gómez (2010)

Following the steps mentioned above, a game is developed that derives from the template in exhibit 4.

### EXHIBIT 4 FINAL TEMPLATE OF THE IS-LEAD GAME

| TECHNICAL TEMPLATE               |   |   |
|----------------------------------|---|---|
| <b>I. GENERALITIES</b>           |   |   |
| Name of the Technique            | Is-LEAD   |   |
| Objective of the game            | The objective of the game is to rescue the group of people who were stranded on the island by accumulating leadership points from each of the participants  |   |
| Number of players                | Minimum 2 and maximum 4 players   |   |
| <b>II. EDUCATIONAL COMPONENT</b> |   |   |
| Name of the Theme                | Situations of Ethical Leadership in Organizational Environments   |   |
| Purpose                          | Teaching and Reinforcement  |   |
| Instructional Objectives         | * Recognize the importance of ethical leadership in organizational relationships      * Identify the position of participants in situations that require decision-making related to leadership<br>* Deliberate on the influence of ethics on leadership decisions in different situations |   |
| Basic concepts of the subject    | Leadership, Values of Organizational Ethics, Virtues of the Ethical Leader  |   |
| <b>III. MATERIALS</b>            |   |   |
| Name                             | Quantity  | Description   |
| Board Is-LEAD                    | 1   | Board of 24 squares illustrated with scenarios divided into 4 Zones: North, South, East and West, representing different areas of the island where the participants will advance: * 1 START box * 5 South Zone boxes (Green-Forest) * 5 West Zone Boxes (Red-Mountain) * 5 North Zone Boxes (Yellow-Plain) * 5 East Zone Boxes (Blue-Coast) * 3 RELAX Boxes |
| Dice                             | 1   | Common dice of 6 sides, each dice contains a different number from 1 to 6   |
| Color tokens                     | 2 a 4   | 1 different color token is assigned to represent each participant.  |
| Laptop                           | 1   | Loaded with the file Is-LEAD.xls  |

| IV GAME RULES  |   |
|--|---|
| Number of Step   | Description   |
| 1  | Review the game materials which consist of: an Is-lead board, color chips, a 6-sided dice, a laptop with the file loaded isLEAD.xlsx and a mouse.   |
| 2  | Choose the token of the preferred color   |
| 3  | Place the tokens in the START box and define the starting order of the participants that are referred to as leaders from that moment. This is done by the roll of the dice, the leader with the highest score starts first and so on  |
| 4  | The route through the game will be clockwise.   |
| 5  | Start the tour of the board by throwing the dice in the order established in point 3.   |
| 6  | The board is divided by zones and colors: green-forest (Justice), red-mountains (Temperance-Strength), yellow-savannah (Integrity), and blue-coast (Tolerance-Prudence) plus each zone has 5 scenarios represented by squares . When you get to a box, use the Excel file and click on the corresponding scenario in the BOARD tab. |
| 7  | A tab is displayed with the chosen scenario and options A, B and C that represent different situations in which a response must be given according to the perception of each participant. These can not be repeated as they will be marked in red, if all the options are complete the player advances to the next box              |
| 8  | Once you have this situation you will choose between options 1, 2 and 3, corresponding to the answer that best suits the player's principles. After chosen the answer will be assigned leadership points according to the chosen option.  |
| 9  | The cursor is positioned in the lower right corner until a hand appears, a click is given that returns to the BOARD tab, in which the points on the right side of the table must be recorded according to the scenario and the option chosen..  |
| 10   | In addition, there are RELAX boxes that consist of 40 situations determined by chance. They do not repeat   |
| 11   | Each time the participant of a full turn to the board, will be added 2 leadership points  |
| 12   | After a set time has passed, the LEADERBOARD tab is shown to the leaders to see the current score and 5 additional turns are added, after they are completed the game is over   |
| V. CRITERION OF SELECTION OF THE WINNER  |   |
| The winner of the game is the one that at the end of the established time and the 5 additional turns are completed, have the highest number of leadership points. To establish a winner in the event of a tie by score at the end of the game, each player with equal points must choose a RELAX scenario option. The points that win or lose will be counted, to continue tied the action is repeated until an absolute winner is defined |   |
| IV. CLOSURE ACTIVITIES   |   |
| <ul style="list-style-type: none"> <li>• Explanation of the different areas of the game and their representation.</li> <li>• Reflection with the participants about what they have learned.</li> <li>• Survey application</li> </ul>   |   |

Exhibit 5 shows the final board for the Is-LEAD game. The board is in English due to the objective of teaching serious games, reinforcing the Anglo-Saxon language by associating the images of the scenarios and situations with the names of the boxes. See exhibit 5 on Page 83.

## RESULTS

To perform the analysis of the results obtained during four sessions of the game, it is established:

1. Analyze the results of the points registered by each player
2. Compare the results derived from the application of the surveys, in addition to the attitudes and comments observed in the participants of each board.

## EXHIBIT 5 BOARD OF THE IS-LEAD GAME.



The efficiencies of the sessions were found above 70%, which indicates that the participants responded to the situations presented, largely focused on leadership and ethical responses, to detail the percentages of scenarios with scores of 4, 2 and 1. Review exhibit 6.

## EXHIBIT 6 SCENARIOS ACCORDING TO POINTS AND EFFICIENCIES OF THE FOUR SESSIONS

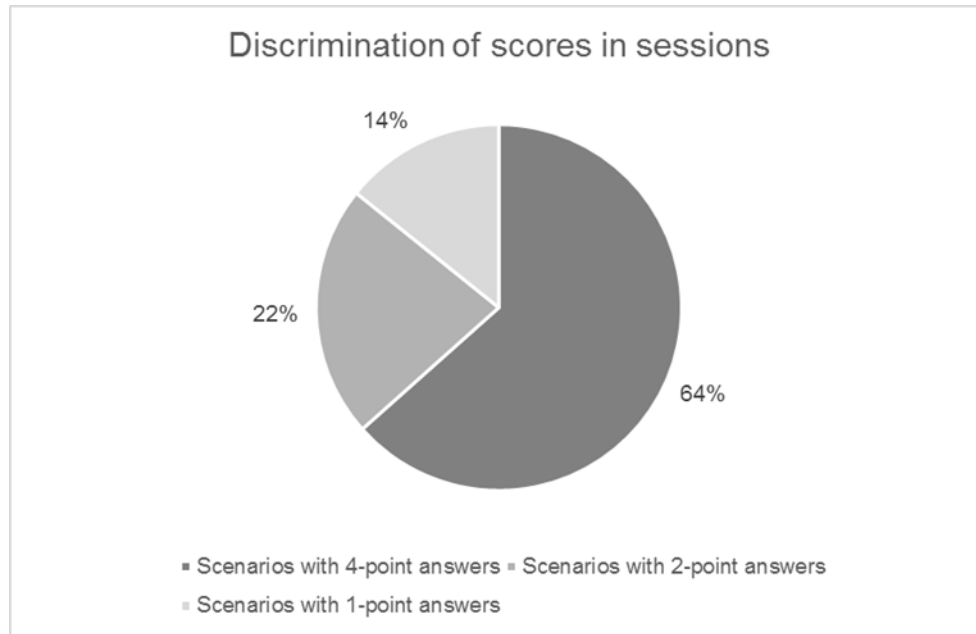
|                                | Session 1 |         | Session 2 |         | Session 3 |         | Session 4 |         |
|--------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|---------|
|                                | Board 1   | Board 2 | Board 1   | Board 2 | Board 1   | Board 2 | Board 1   | Board 2 |
| Total scenarios with answers   | 37        | 36      | 48        | 52      | 37        | 35      | 31        | 33      |
| Scenarios with 4-point answers | 21        | 21      | 28        | 35      | 29        | 26      | 15        | 21      |
| Scenarios with 2-point answers | 12        | 8       | 12        | 10      | 4         | 7       | 10        | 6       |
| Scenarios with 1-point answers | 4         | 7       | 8         | 7       | 4         | 2       | 6         | 6       |
| Efficiency of 4 points         | 57%       | 58%     | 58%       | 67%     | 78%       | 74%     | 48%       | 64%     |
| Efficiency of 2 points         | 32%       | 22%     | 25%       | 19%     | 11%       | 20%     | 32%       | 18%     |
| Efficiency of 1 point          | 11%       | 19%     | 17%       | 13%     | 11%       | 6%      | 19%       | 18%     |

Reviewing these data, it is important to highlight:

- The answers of 4 points that correspond to the situations where an ethical leadership behavior is established, have an efficiency greater than 50% except in board1 of session 4, which obtained a percentage of 48%
- Board 1 of session 3 obtained a value of 78% being the top of these sessions, the players of that session showed that almost 4/5 of their position in these scenarios are based on ethical leadership.
- The 19% value of boards 2 and 1 of sessions 1 and 4 respectively represent the largest number of responses without a leadership or ethical component. Under this premise it is considered that the board 1 of session 4 has the most deficient score and with the undesired results.

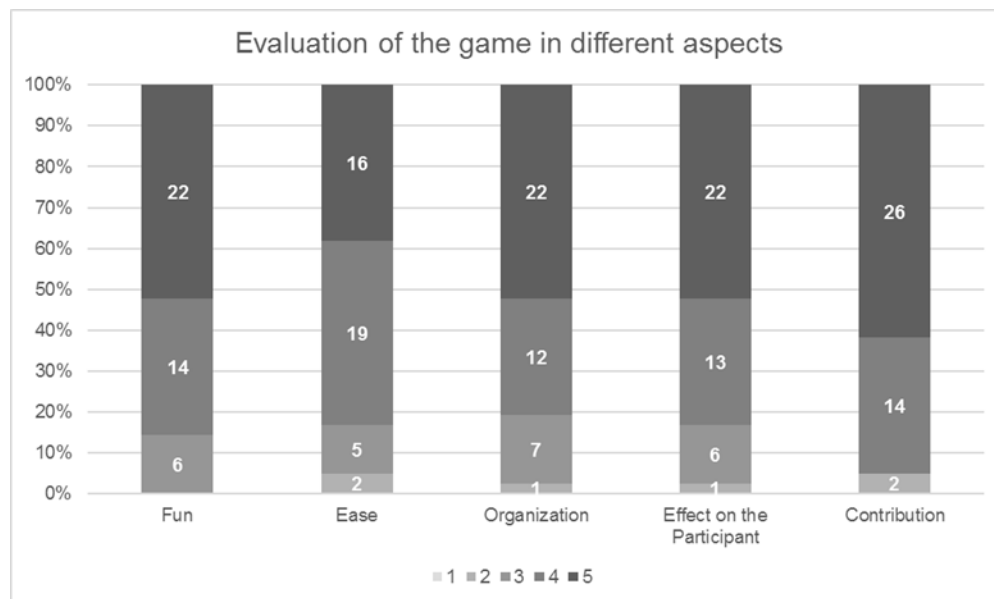
Exhibit 7 shows the consolidation of the 4 sessions which identifies 64% of responses of 4 points, 22% of 2 points and 14% of 1 point. These values represent how players have attitudes towards situations of the scenarios and despite generating efficiencies of points greater than 70% in all sessions, leadership responses with an ethical component do not reach 65%.

**EXHIBIT 7**  
**PERCENTAGE ACCORDING TO THE VALUE OF THE ANSWERS DURING SESSIONS**



Next, the answers of the players after the application of the game to the questions of the developed survey are analyzed. The sample of players surveyed is 42. Exhibit 8 shows the values from 1 to 5 of the aspects of the game expressed by the participants of the sessions.

**EXHIBIT 8**  
**EVALUATION OF THE GAME ACCORDING TO PLAYERS' PERCEPTION OF THE SESSIONS**



The scores 4 and 5 predominate in the responses of the various aspects of the game. Among them, the following stands out:

- The contribution that the game has, in which only 2 participants rated with a value of 2, and 95% responded that the game contributes to understand leadership concepts.
- The effect it has on the participants is positive, since only 1 person qualified them below 3.
- The fun component of the game is well valued and that is a confirmation of the recreational / entertaining expressions shown during the applications.

The relevant question to establish whether the game met the general objective is the question that determines the learning of

the game, in which 88.1% of the respondents answered that the game teaches ethical leadership over isolated concepts of leadership and ethics, highlighting that no participant thinks that he or she did not learn anything from the game.

## CONCLUSIONS

- Ethical leadership must include vision, coordination and change, but because it is ethical, it is based on moral virtues, especially in: prudence, justice, strength, integrity and temperance; Prudence is the business virtue par excellence. Temperance is related to serene mood and is necessary in difficult times to maintain calm. Strength is the virtue of encouragement. But all these virtues have no meaning if the leader is not fair, that is, if he is not upright.
- Serious games are mechanisms that allow simulating daily life scenarios and moving players to scenarios in which they make decisions, based on convictions and personal experiences; They are tools that allow teaching and reinforcing specific concepts of a subject through fun, stimulation, and simulation of real world problems, allowing participants to actively participate in the teaching - learning - practice process.
- The process developed for the design of the Is-LEAD game that involves the design and validation, which was done with the statistical results, allows us to conclude that serious games based on experiences offer the designer opportunities, since they are easy to perform and are within the reach of anyone.
- Ethical leadership is important in all societies and organizations, but especially in those in which the boundaries between the ethical and the unethical become diffuse. The ethical leadership seeks that the internal beliefs and values of the leaders are aligned with external behaviors and actions, with the purpose of promoting the common good in an organization.
- Because all the participants of the different sessions were different from each other (undergraduate, graduate, technicians, chiefs, leaders, auxiliary students), the scoring values were very high in some cases and low in others, this is due to that ethical leadership is based on own values acquired with experience and maturity of each person. Proving that the critical position of each player is a determining factor in the scenarios presented, possibly due to the economic, family and personal situation of the groups of participants.

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