

RESEARCH REPORT

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ABSTRACT

This research study had as main objectives to identify participants' perceptions about the four (4) areas of administration in the Tycoon Anno and at the same time to establish its strengths and weaknesses. In order to obtain such information, a qualitative-descriptive case study was carried out through coding frames and a survey applied to five (5) participants. Thanks to the research valuable results were found which aim at the existence of three (3) areas of administration and one (1) of these is not made evident. On the other hand relevant strengths and weaknesses were found, for those reasons it contributes to do recommendations at the end of the document.

Key words: Tycoon, management, marketing, financial, human resources, perception, ICT.

RESUMEN

Este reporte investigativo tiene como principales objetivos identificar las percepciones de los participantes acerca de las 4 áreas de administración en el juego de simulación empresarial Anno y a su vez establecer las fortalezas y debilidades del mismo. Para obtener dicha información, se realizó un estudio cualitativo-descriptivo por medio de matrices y una encuesta aplicada a cinco (5) participantes. Gracias a la investigación realizada se encontraron resultados muy valiosos donde apuntan a la existencia de tres (3) de las áreas de administración y una (1) de ellas no. Por otro lado fortalezas y debilidades muy pertinentes, lo cual ayuda a realizar recomendaciones al final del documento.

Palabras Clave: Simuladores gerenciales, administración, mercadeo, finanzas, recursos humanos, percepciones, TIC.

INTRODUCTION

Currently there is the need of learning administration due to the fact that it is a science that can be applied in businesses and daily life contexts. Since management is difficult to learn, there are different ways to do it. One of them is through the implementation of business games where gamers can practice key concepts for developing management skills. According to Woolfolk as cited by Gómez (2010) “This kind of games emerge as alternative for overtaking business training process, because, through the experience, it produces permanent changes in the knowledge or behavior of the participants, by life lessons simulations but without negative effects for the organization”(p.10). For that reason this research report aims at identifying the perceptions of five (5) participants about the presence of four (4) main areas of a company in the Tycoon Anno. Additionally, this research aims at establishing the strengths and weaknesses in the Tycoon Anno as stated by the participants.

This document includes a statement of the problem, a theoretical framework, a methodology in which is the description of the research report, afterwards the results that bring the investigation represented in coding frames, conclusions, recommendations and references. The following report was developed in Bogota city. It lasted one month, whereas the Tycoon Anno was given in class, of a list games for developing the research report.

Objectives

The main objectives of this research are to:

- To identify the participants’ perceptions about the presence of the four (4) areas of a company in the Tycoon Anno.
- To establish strengths and weaknesses in the Tycoon Anno as stated by the participants.

THEORETICAL FRAMEWORK

Background

In this research report, it is important to know about some terms that will help during the reading to understand the research report.. Therefore, two (2) important projects related to this research report will be shown below and a short history about business games.

The first use of simulators in Latin-America was given by Instituto Tecnológico y de Estudios Superiores de Monterrey, in 1963; which uses this simulator in the MBA of management, then the hardware was updated and it was introduced in places as London, Mexico and Lima for the online service and at the same time in different places and people. (Delgado et al., 2014, p.2)

A project called *Impacto de los juegos gerenciales en los programas de administración de empresas como herramienta pedagógica* had the objective of presenting an analysis about the importance of managerial games as a pedagogic tool in some business administration programs in Bogotá D.C. In order to achieve this, a literature review was developed about managerial games, both in international and national scopes, as well as a field work in five universities of Bogotá where information about undergraduate students' perception on the application and support of managerial games to their formation process was obtained. The research showed interesting results, on one hand, positive perceptions of students about the attraction of managerial games as a learning tool because of the benefits that it presents; on the other hand, the universities show low interest on this pedagogical tool. This is evidenced in low investment of physical, human and economic resources for developing and applying these games; showing competitive disadvantages in front of students of administrative sciences abroad.(Plata et al.,2009,p.1)

Another project called *Apoyando el aprendizaje de habilidades empresariales mediante la utilización de un simulador* was carried out in Paraguay and the authors analyzed a simulator called Lider and its effect on students. The sample included 35 students of second course of Bachillerato Técnico en Administración de Negocios (BATAN) at Colegio Cristo Rey (Asunción, Paraguay). Taking into account the experimental results, it can be seen that the business simulator was developed as a tool that assesses the result, effort and dedication that the students have in the activity properly (González et al., n.d.).

This report was based on some concepts that helped the researchers guide, support and explain the research; the first key concept is Tycoon explained based on findings researchers as (Collantes, 2010); (Gonzalez , 1999) and (Reese, 2007; Kearney & Pivec, 2007).

The second is the four (4) main areas of the company, where each one of them is explained below.

Tycoon

Business games are tools that help us practice our management knowledge before facing a real situation in a company, in which we can take decisions in terms of sales, management, human resources and finances. Business simulator games, according to Collantes (2010),” are propitious stages in order to gamers live discovery experiences and they confront adversities, through achievement and mistakes, and at the same time are spaces in order to the gamer reflect and analyze how to improve their proceed.” These products, which are available in a computer-game based format, have shown different alternatives to confront the gamer to circumstances that imply how to manage a company. In these kinds of games it is common that the gamer has to take decisions about the sales, production, management, human resources, collections, etc. According to Dickinson as cited by (Collantes, 2010).

Business games can be divided in two groups: specific or general. The first group is focused on improving the knowledge about a specific area of the company. The second group is based on the use of business strategies and how to take decisions in a company (Gonzalez, 1999).

Tycoon is a tool that helps management area with practicing and the knowledge skills. Besides of being an app in the ITC world, that involves the gamer in the virtual world of learning. A lot of researchers Reese Kearney & Pivec as cited by Sedano et al. (2014) consider that “Business Games help not only in the learning process, but the immersion of the gamer in the virtual world or space in which the simulation is developed too”(p.37).

Four (4) main areas of the company

Management

In an organization, management is the process of allocating resources such as human, financial, marketing and managerial, through the functions planning, organizing, leading and controlling. This area coordinates the efforts of employees, to accomplish efficiently and effectively the established goals, according to Lundy as cited by (Sakthivel 2004). There are different levels of management as: the top managers, middle managers and first-line managers, other management areas as human resources, finances, marketing and production and fundamental functions of management.

According to Koontz and O'Donnell as cited by (sakthivel 2004) “Management is the creation and maintenance of an internal environment in an enterprise where individuals, working in groups, can perform efficiently and effectively towards the attainment of group goals” (p.2) it is possible to say that each part of the company depends on each other one.

Marketing

The chartered Institute of Marketing (2009) offers the following definition for marketing “marketing is the management process responsible for identifying, anticipating and satisfying customer requirements profitably” (p.2). In addition it can be said that the main purpose of the marketing area is to comprehend the costumers, identify what they require, what they prefer, what they do not prefer and then transform their needs into products or services.

As The chartered Institute of Marketing (2009) says: A successful marketing depends upon seven (7) key concepts known as the 7Ps of marketing Product, Price, Place, Promotion, People, Process and Physical evidence in some cases called as marketing mix but a few years ago were only 4Ps. This area must accomplish nine (9) main functions in which we found: buying, selling, financing, storage, transportation, processing, risk-taking and market information.

Human resources

In order to analyze and comprehend its meaning, functions and responsibilities of the human resources area, according to Byars & Rue as cited by Jones,et al. (n.d.) “ Human resources management is defined as a system of activities and strategies that focus on successfully managing employees at all levels of an organization to achieve organizational goals”(p.3). Some important functions of this area are recruitment and selection, training and development, professional development, compensation and benefits and ensuring legal compliance.

On the other hand, human resources management (HRM) is the management activity taken by commercial firms, state owned enterprises and other organizations to recruit, retain and motivate their employees. In other words HRM is the bundle of policies, programs and plans which organizations adopt with the objective of making full use of the people they employ according to (Coyle-Shapiro, et al. 2013, p.1)

Financial

Financial management is an integral part of overall management. It is concerned with the duties of the financial managers in the business firm. The term financial management has been defined by Solomon as cited by Paramasivan, et al., (n.d). "It is concerned with the efficient use of an important economic resource namely, capital funds" (p.3). The main objective of this area is to assign the company's resources in a suitable way aiming at maximizing the value of the company and ultimately the shareholders' investment.

ICT and Learning

Nowadays, technology is helping people in some aspects of their lives, it is possible to have the information in your hands, be updated all the time, play games and even learn. In this research it is important to know, what the relationship between ICTs and learning process is. According to Davis and Tearle, Lemke and Coughlin, as cited by Ul-Amin (n.d.) "ICTs have the potential to accelerate, enrich, and deepen skills, to motivate and engage students, to help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change" (There are different types of learning as E-learning, B-learning, M-learning and G-learning, that help the process of acquiring and applying knowledge, preparing the student for the future as Wheeler as cited by Ul-Amin (n.d.) said "ICT will not only enhance learning environments, but also prepare next generation for future lives and careers"

Now that the concepts are explained, this research expects to find the presence of the four (4) main areas in the tycoon Anno, the strengths and weaknesses reported by the participants. Some

instruments will be applied in order to evidence the constructs in contrast to the theoretical framework.

RESEARCH DESIGN

Methodology

In this research report the methodology and the techniques had a qualitative descriptive approach due to the fact that the information was provided and analyzed through data in words rather than numbers or statistical information, opinions and images not in numbers with a case study that analyze a currently phenomenon that in this case are the simulators. Bonilla (1994) “The main characteristic of qualitative research is its interest to receive the social reality “through people eyes who are studied” (p. 47) Hernandez, et al. (2003) and “the descriptive research looks for specific properties, characteristics and important outlines of any phenomenon that is analyzed” (p. 119). According to Urquidi, et al. (2014) “It is understood that simulators are tools that had the objective that participants confront challenges that simplified models of reality” (p.3).

Data collection techniques and procedures

In the qualitative descriptive approach the datum will be measured by a survey, according to Jansen (2012) “qualitative survey is diversity study (not of distribution) in population”(p.43) and coding frames, in which the information obtained, will allow give answer to the objectives raised in the research. Survey had fourteen (14) questions and five (5) coding frames related with weaknesses and strengths, the four (4) main areas; the coding frames were made for researchers of this project and these were made with punctual open questions for the develop of this research

Participants

Five (5) participants were chosen randomly and they participated voluntarily out of a group of 10 people, in an age rank of 25 - 30 years old, three (3) men and three women (2). They are undergraduate and others are professionals in different areas as Medicine, Engineering, and the others related to humanities. Participants were invited to play during a period of two weeks the Tycoon Anno 1 hour per day.

Time of data collection and analysis

Participants were assembled during a period of time of three (3) hours in which a survey and a coding frames were applied, then collected data were analyzed during one (1) week.

FINDINGS

1. Perception about the main 4 areas of a company

After applying the instruments for the data collection as coding frames and survey the following information was identified: Participants perceive that three (3) of the main four (4) areas of the company were partially identified like: management, human resources and financial area, just one area was not recognized by the participants: marketing, due to following perceptions: In management area participants perceive that management resources appeared in the game represented in supplies, meals, clothing and entertainment. On the other hand, they perceive partially the tasking due to not all participants identify the different tasks as: fishing and woodcutting.

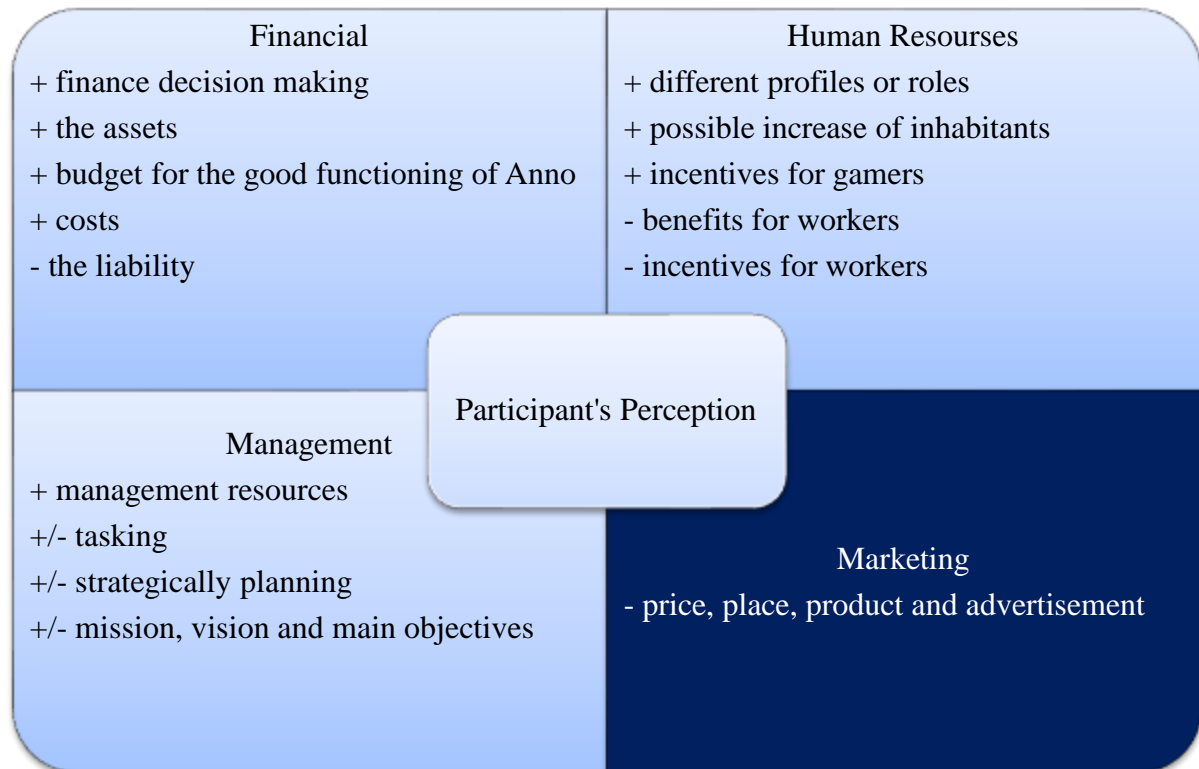
In addition, they can see strategically planning partially because not all participants could identify a clear strategical planning, but some of them identified it in the way that in the game it is necessary to put everything together properly.

Finally some of the participants could see: mission, vision and main objectives and the other ones could not see it. These elements were evidenced in the coding frame. Participant 4 “El objetivo de éste juego es crear y mantener una isla de manera rentable, es decir que tus habitantes no se vayan y estén satisfechos para poder trabajar y de esta forma producir bienes. (Misión) y la visión es conquistar toda la isla”

In Human Resources area, participants perceive different profiles or roles inside the game as: pioneers, woodcutter, fishers, also, they could detect the possible increase of inhabitants (workers). According to Participant 2 in a question about the existence of different profiles inside the game, he reported in the coding frame: “de lo que se puede apreciar si, puesto que hay pioneros, leñadores, pescadores y cada uno desarrolla funciones diferentes.” In addition some of the participants were not able to find benefits for workers. Lastly, participants observe incentives for themselves, but not for workers.

In finance area participants evidence finance decision making due to the fact that the game showed a good way for investing. Furthermore they can see the assets but not the liability in the game. They can see the budget for the good functioning of tycoon. It can be concluded that all participants agree on the fact that costs appear during all the game.

In marketing area all participants answered that price, place, product and advertisement were not possible to be identified. In relation to price it is possible to say that is not perceived by participant because they cannot sell anything in the game, the gamer can only see prices of all products but he cannot buy it, for example: houses, ships, cathedrals or pubs. Participant n°1 answered “no, solo vemos el precio de las construcciones más no de los alimentos a consumir por la aldea”.



Graph 1. Participant's perception. Source: Authors

The management, human resources and financial areas have partially presence inside the game but the marketing area hasn't presence in the game.

It is possible to say that participants can only see 3 areas out of four because the game is not clear in marketing area, they cannot sell their property, and there is not possibility to advertise or launch a new product.

2. Perception about weaknesses and strengths

After applying the instruments for the data collection as coding frames and survey the following information was identified:

The weaknesses were common according to participants as:

The game turns boring because a lot of time is required to complete a mission and it is not interactive. For those reasons the game turned monotonous. It is possible to say that the game is monotonous because participants usually like games related with battles, guns, more action, interact with another gamer, not just chatting or visiting the island. There is not a correct space to the battleships and it is really simple and lacks of guns. This idea is supported by the answer of participant n° 3 when the survey asks about a weaknesses of Anno: “poca interacción con otros jugadores, además el juego se vuelve muy aburrido, no permite que el jugador tenga varios roles y no es muy interactivo.”

According to participant n° 4 “a veces se centra sólo en lo económico y la guerra entre barcos no siempre se torna entretenida, faltan guerras de soldados”.

Participants required play the game for a lot of time, it is not enough play one hour per day because the island going lost the advances that gamers did. One possible interpretation of this is that gamer getting tired in the moment that they don't observe a relevant advance and they need to go back in the tasking that they do. All is not possible to have a relation with other gamers, Players can only visit other players' islands and they cannot help them buy any of their products. The strengths were common according to participants as:

Main strengths that Anno has and participants agree are the graphics, music, design. Is possible to interpret that participants needs a game with good characteristics and has visual impact as participant n° 3 reply: “El juego Anno tiene muy buenas gráficas, la música es muy entretenida y el diseño del juego es claro.”

The other ones think that Anno captures their attention easily because it has a good tutorial in all the game, even it helps to make a right decision in terms of increase or not the island.

Participants evidence that Anno is very easy to play and they can advance rapidly in the first levels. In addition is important to say that a game requires a tutorial or accompaniment during all the game in order to gamers understand the developing of it. Participant n° 1 wrote when the survey ask about the strengths: “Es fácil, porque el juego te va diciendo que debes hacer, eso lo veo como Fortaleza porque existen juegos que solo te dejan en el agua y tu veras como lo vas desarrollando”.

One of the benefits of the game is that gamers can improve their abilities to make decisions and they can learn something related about management. Is feasible to deduce that Anno helps in some management knowledge, for example participant n°1 “Si, principalmente de área administrativa, se puede crear un modelo de empresa y el crecimiento de la misma obteniendo ganancias y volviendo a invertir”. In Graph 2 you can evidenciate the weaknesses and strenghts recognized by participants.

<input type="checkbox"/> WEAKNESSES	<input type="checkbox"/> STRENGTHS
-------------------------------------	------------------------------------

- | | |
|---|--|
| <input type="checkbox"/> The game turns boring | <input type="checkbox"/> Graphics, music, design |
| <input type="checkbox"/> Not interactive | <input type="checkbox"/> Good tutorial |
| <input type="checkbox"/> Played for a lot of time | <input type="checkbox"/> Easy to play |

Graph 2. Weaknesses & Strengths Source: Authors

CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The results during this research help us to get an analysis of tycoon Anno and help us to answer the objectives that the report has.

The areas as: management, human resources and financial, have partially presence inside the game according to the participant's perception, on the other hand marketing area hasn't presence in the game.

In the same way, results help us to identify strengths and weaknesses. The first strength is the design and the accompaniment in the game; participants were really impressed about it due to other games leaved you alone. The other strength is about making right decisions; this game helps to improve the administration knowledge and how to maintain profitable the company, in this case the island.

The weaknesses perceived by participants in the tycoon Anno are the game turned monotonous due to gamers need to spend a lot of time for developing a mission and they didn't like the lack of interactive in the game.

It is possible to say as a recommendation that this game needs to give to gamers the opportunity to launch and develop by themselves new products and be involved in the marketing process (Niche Market, Market Research, Target Market and Marketing Strategies), and for weaknesses part a possible recommendations are that the game should be more interactive and includes a war space or the possibility to have more attractive products that help to the gamer to be involved during all the game.

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APPENDIX 1 CODING FRAME – AREA ADMINISTRATIVA

Tycoon Anno Area administrativa	
Pregunta	Respuesta
¿Se evidencia la administración de los recursos? Si / no ¿De qué manera?	
¿Se evidencia una asignación de tareas? si/no ¿De qué manera?	
¿Se lleva a cabo una planificación estrategica durante el juego? Si / no ¿De qué manera?	
¿Durante el juego se pueden establecer: misión, visión y objetivos ? Si/no ¿De qué manera?	

APPENDIX 2

Tycoon Anno Área de Mercadeo	
Pregunta	Respuesta
¿Qué necesidades o deseos se pueden suplir en el juego? ¿De qué manera?	
Existe la posibilidad de lanzar nuevos productos en el juego ¿Si/No? ¿Por qué?	
¿Se evidencia el producto el cual se quiere comercializar? ¿De qué forma?	
¿Se evidencia el precio al que se va a vender el producto, el precio de mercado y el precio de los competidores?	
¿Se identifica el mercado donde se piensa insertar el producto? ¿Y qué características tiene?	
Cree usted ¿Qué hay un uso adecuado de publicidad dentro del juego? Si/ No ¿De qué manera?	

APPENDIX 3

Tycoon Anno Área de Recursos Humanos	
Pregunta	Respuesta
¿Existen perfiles específicos en el juego para los empleados? Si/No ¿De qué manera?	
¿Existen oportunidades de ascenso? Si/No ¿De qué manera?	
¿Existen beneficios para los empleados? Si/No ¿De qué manera?	
¿Existen premios o incentivos para los empleados? Si/No ¿De qué manera?	

APPENDIX 4

Tycoon Anno Área Financiera	
Pregunta	Respuesta
¿Permite al jugador tomar decisiones estrategicas financieras? ¿De qué manera?	
¿Ofrece información sobre los activos (Bienes que posee el juego)y pasivos (deudas u obligaciones)del juego?	
¿Permite determinar la cantidad de fondos requeridos para el funcionamiento del juego?	
¿Brinda información sobre costos?	

APPENDIX 5

Tycoon Anno		
	Debilidades	Fortalezas
Diseño	poca definicion de imagen	
Interactividad	explican todo paso a paso	
Complejidad	Muy sencillo lo cual ocasiona que el jugador se aburra	
Entretenimiento	Luego de un tiempo aburre al ser tan sencillo	
Otra	N/A	

APPENDIX 6 SURVEY

¿Hasta qué nivel llego en el juego Anno?

- 1-5
- 6-10
- 11-15
- 16-20
- Otro:

¿Cuál es su opinión acerca de este tipo de juegos?

¿Ha tenido experiencia previa con éste tipo de juegos?

- si
- no

Describa su experiencia con el tycoon Anno

¿Qué opina acerca del diseño del juego?

¿Qué fortaleza (s) percibe en el juego Anno?

¿Qué debilidad (es) percibe en el Juego Anno?

¿Cree usted que el juego Anno, simula un espacio empresarial? si/ no ¿Por qué razón?

¿Se evidencia la administración de recursos? ¿Si/no? ¿De qué manera?

¿Qué necesidades o deseos se pueden suplir en el juego? ¿De qué manera?

¿Existen beneficios para los empleados? si/ no ¿de qué manera?

¿Cree usted que el juego ayuda a mejorar la toma de decisiones en una empresa? si/no ¿de qué manera?

¿Cree usted que el juego afianza los conocimientos de algún área empresarial específica, siendo estas: administrativa, mercadeo, financiera, recursos humanos? si/no ¿de qué manera?

¿Considera usted que el uso del simulador le permitió aprender algún aspecto en general?

