

# Methodi Quantitative

A ludic way  
for learning  
quantitative  
methodology  
in psychology

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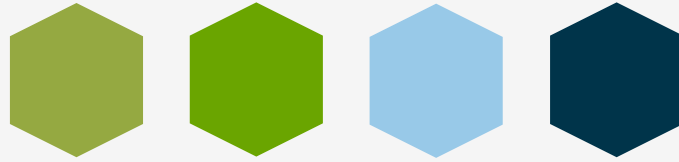


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# Introduction

This project started in the Psychology program of the Universidad Nacional de Colombia



- *The project consisted of a video game for mobile platforms—smartphones—that strengthens the learning process within the classroom.*
- *It addresses the core topics of the compulsory subject Quantitative Methods in Psychology, during 2016:*
  - *a) Understanding of the research process.*
  - *b) Methods for conducting descriptive research, either applied or experimental.*



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# Theoretical Framework

## Digital Game-Based Learning - DGBL

### Digital Games

- Gamification.
- Novelty, challenge, excitement, and harmony, as well as the perceived threat (VandenBerghe [4]).

### Entertaining Learning Environment

- Learner—or user model.
- Methodology that orients the activities and problems to be solved.

### Content Learning

- Teaching-Learning Process.
- Accessible, attractive, and enjoyable.



# Structuring Strategies for the Video Game

Made with



Topic Choice and  
Internal Connection to  
the Video Game  
Narrative



Selection of the Video  
Game Level Designers



Mechanisms for the  
Elaboration of the  
Levels



Verification Process  
for the Proficiency of  
the Levels

# Topic Choice and Internal Connection to the Video Game Narrative



## Choice of the contents for the game

The director of the project has been in charge of the subject for two years and she was responsible for choosing the topics to be addressed in the video game.



## Narrative and Topics

- Open world (sandbox).
- Mysterious disappearance of the professor.
- Logical sequence was maintained but in some cases the topics were split.



Quantitative  
Methods in  
Psychology

# Selection of the Video Game Level Designers

## Advanced Students

'Mappers'

## General Profile

*"graduate professionals or advanced students [...] with expertise as players, learners and pedagogues" [3].*

# Mechanisms for the Elaboration of the Levels



## Mission Sheets

- It outline the minimum criteria to be met at each level and allows standardizing those criteria.
- It guide the programmers on the requirement and content of each level.



## Designers Team

- A couple of advanced students.
- Collaborative construction and proper triangulation of ideas and key concepts to be included in each level.



# Verification Process for the Proficiency of the Levels

## Peer Review

- Pedagogical and ludological advisors.
- Programming team.
- Illustration team.

## Pretesting

- Pencil and paper test of the tasks.
- The specific mechanics are presented to a pair of students—'pre-testers'.



# Conclusions and recommendations

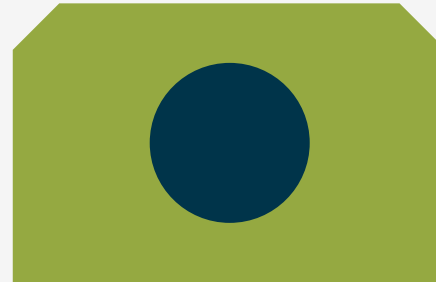


## Digital Game-Based Learning



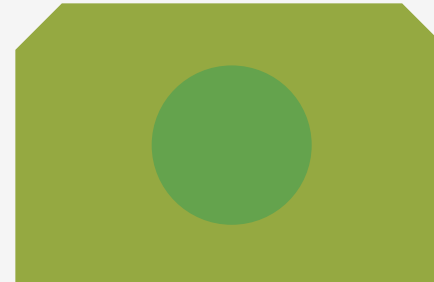
The DGBL approach allows emphasizing the necessary articulation between the **recreational activities** and the **curriculum** that is taught in the classroom.

## Mission Sheet



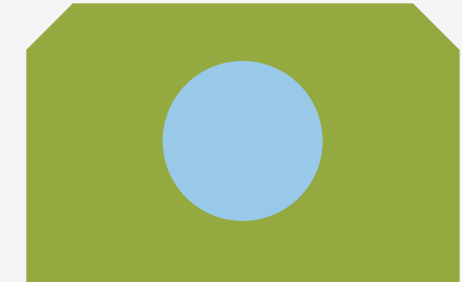
Facilitates the verification of the adequacy for each of the proposals and the programming of the videogame.

## Financial resources



It is needed to be foreseen to make up an interdisciplinary team involving pedagogical, psychological, ludological, digital illustration and programming.

## Ludo-narrative universe



The possibilities are worth being expanded to other related fields such as psychometrics and qualitative methods.

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