

TASK: A Transformational Videogame

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<http://www.workingexamples.org/example/show/688>

Design students need to learn ethnographic skills for user-centered design. We want them to learn that in an interview there are different kinds of questions that can lead to different kind of responses. To do this, we are designing a video game to allow a situated learning experience through the dynamics between people, content, and context. In this game the following concepts are being applied: Transformational Play (Barab, 2010), Player Experience Need of Satisfaction (Rigby & Ryan, 2011) and the 36 learning principles of learning (Gee, 2003).

Seed

Tell us about your idea or project. What's your vision?

Based on situated learning theories, we want to make a transformational videogame in which people, content and context can give value to educational experiences.

We see virtual environments as an ideal resource with multiple affordances for situated learning spaces inside the traditional school system and as an opportunity for researchers to study the importance of the integration of the information into daily activities of the student.

For the design of this game we are applying transformational play concepts when students commit with learning levels (Barab, 2010), Player Experience Need of Satisfaction (Rigby & Ryan, 2011) and the 36 learning principles of learning (Gee, 2003).

What problem are you trying to solve and why does it matter?

The problem is that design students are not making an empathic connection with the final user. The user is a basic condition for any experience design; he has to be present in two stages of the process: the first so they can be empathic of his needs; second when he can evaluate the object or service created.

For the first part, designers need to know and apply different qualitative investigation techniques like a diary, observation and interview, just to name the most common ones. The main goal of this process is to obtain significant information, with this we mean sufficient and with quality, so they can be able to work with real concepts created

after an organization of intelligent perceptions (Noel & Frascara, 2012).

The problem with the lack of empathy is that without this cognitive and emotional skill, is very difficult for a designer to do a good job, especially when the most of the problems they need to solve are related to human experiences.

What are your goals and how will you know if you've achieved them?

The main goal is to design, develop and evaluate a educational videogame to increase the learning motivation of designers, using as a pedagogical frame situated learning theory through: Gee's (2003) videogames learning design principles, Rigby & Ryan (2011) player experience needs of satisfaction and transformational play (2010).

The particular goals of this study are:

- to create a videogame prototype based on the established methodology;
- to evaluate the usability, learning and motivation of the prototype with design students;
- to establish the needs of the team work for the development of further prototype levels and the development of videogames for learning based on the same theoretical framework model.

For the *first particular goal*, the three theoretical models will be reviewed to find their similarities and points of convergence and use the model to design the learning experience.

For the *second particular goal*, the learning experience will be evaluated through a qualitative study with and emphasis in the observation of the experience. As a result we will have all the data related to decisions and attitudes taken by the students during the gaming experience. Also, before the experience a survey will be applied to know information related to their gaming experiences, and after the experience another survey and an interview will be applied to know how the student felt during the experience. The model to evaluate if the main goal was achieved is still in process.

After all the experiences, hopefully the information gathered will help to establish the technical, economical and people affordances needs to convene a team for further similar projects.

Who will your work impact? What do you know about them?

The final users of this game are interaction design students. They are between 18 and 21 years approximately. Most of them had grown up playing videogames and that's why they have a strong connection with that theme. They are very interested in producing videogames, but they are not clear of the difficulty it takes.

An important consideration is that the students are amazed by the way this digital products made them feel but they are not conscious of the amount of work that is required to produce them. We think that a videogame can be a good way to engage them but we are curious to know if the high exposure of this interactive experiences can demand specific stimulating affordances.

Tell us about the team you have assembled or hope to assemble.

Initially this project was a PhD proposal with only two people working in the design: me, Roberto Razo as student and researcher, and Antonio Santos as the academic advisor who guided all the theoretical part of the investigation.

For the video game production, we will be supported with a video game company that is emerging with very professional interesting projects named Bromio.

Recently a strategic and innovation designer student is working in the project as an assistant researcher.

Sprout

Tell us about your process and how your idea is evolving throughout the project.

Initially the videogame was based on transformational play theory with the idea to develop a virtual experience based on the different engagement levels: *procedural*, *conceptual*, *consequential*, and *critical*. A Transformational Game is not exclusive of a virtual environment as long as the engagement levels are achieved and it can be implemented in a classroom or any other place. So because the idea was to implement this theory in a videogame,

the design model needed to take into account why video games as medium can be so motivating to the player.

Glued to Games (Rigby & Ryan, 2011) is a book that presents the Player Experience Needs of Satisfaction (PENS) as a very important concept that we thought it needed to be consider for the design of our game. They present this needs as the reason why the videogames are so engaging to some people: *need for competence*, *need for autonomy*, and *need for relatedness*. So every well designed game have to cover this needs considering the human factor that make us spend so much time engaged to this interactive spaces.

Also for the final design model, the *36 learning principles of learning* (Gee, 2003) are considered as the principal guide to reach the educational goals of the proposal.

So the design model of this project was based on three big concepts:

1. Transformational Play Theory (Barab, 2010).
2. Player Experience Needs of Satisfaction (Rigby & Ryan, 2011).
3. 36 principles of learning (Gee).

The following table (*Spanish*) shows how they are related:

GLS-Project-Design-Model.pdf (<http://www.workingexamples.org/uploads/File/837>)

What are some of your initial concepts or designs? We'd love to see them.



Figure 1: Initial Visual Concepts.

Have your initial concepts/designs changed? Why have they changed? Show us how they're being refined and iterated.

The story of the game is about a character that needs to obtain information through interviewing different people in a place that was recently adopted by another civilization. We select some specific recommendations, based on literature, to obtain better results with each interview and it consists with what and how experts ask, included in the following list: (a) what, when, where, who instead of how, why; (b) last instance instead of typical instance; (c) compare and contrast instead of criticize; (d) encourage stories; (e) avoid asking binary questions; (f) don't suggest answers to your questions.

Also in the game the following interview flow will be encouraged:

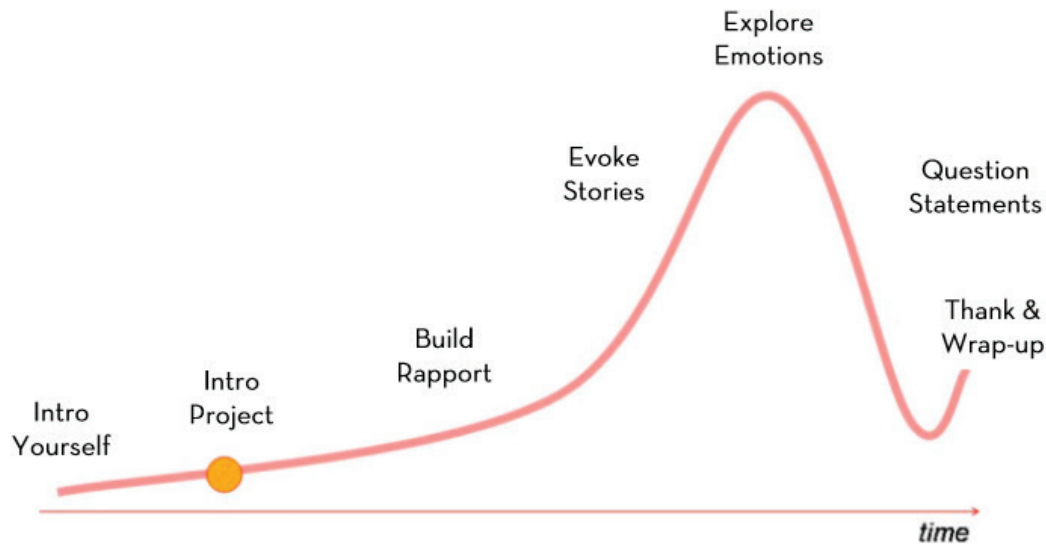


Figure 2: Interview for Empathy (Plattner, 2010).

The call of hero: For this game, the main purpose of the character in the story is to help the Designer Master to create a flag, ideally to make an emphatic connection between two cultures. The Flag Master is an old man that makes marvelous designs that had changed the history of many places, the problem is that he is so old that he can't walk and hear very well any more; for this reason, you as his apprentice need to gather all the information he needs for creating this object. This way the master is going to interpret all this data and transform it to visual object, the flag.

How might your project scale to provide greater impact?

Currently we are working on the first prototype for the PhD dissertation, but there are plans for scale the prototype for a greater impact in the students.

Playable Digital Prototype - Level 1:

Goal of the player is to gather information for the Master. To do this he needs to make 8 interviews in which he have to choose what questions to ask from a multiple option (three questions each). The questions will be based on the previous Master recommendations and depending which ones they choose, they will achieve a more or less level of empathy. The empathy level in each interview will decide if the final flag design will consider aspects of both cultures and will define the consequence of the final result.

Procedural Engagement: The system (the Master) will give the player the recommendation of which questions to make. Based on a visual diagram, the player must seek for the center of a three circles: the external one is the context, the middle one is the action and the one of the center is the emotions.

Conceptual Engagement: The player has the opportunity to choose which question to make based on the Master recommendations, which represent the best practice.

Critical Engagement: Depending on what kind of information you gather, eventually the Flag will have a different design and different outcomes, which affects somehow the context in which the game is taking part.

Playable Digital Prototype - Level 2:

In this version after the first Level is completed, the Master dies but he leaves the resources of how to make a good flag around the village so the player have to find them first. While he gather all the recommendations, a pool of elements which represent the different kind of questions he can make, will be display in an interface in which they can design and check the interview before they make it. This interface will represent a way to communicate with the Design Master who is already dead. In this version of the game there are not going to choose from a multiple option but instead they will need to find the resources to design a good interview that gives them the best possible

answers.

Also because it will be no Master Designer to make the flag, another section of the game will appear in which the player will be able to design of the flag. For each well done interview the designer will receive resources (materials) to create a flag and at the same time, the information received will help him to know which of this elements and symbolism will help them to reach their final goal which is to support an ideological and cultural conquest through this banner.

Procedural Engagement: The context will have the information that he needs to make the interviews, also the characters will give the resources for the flag design depending of the quality of the interview.

Conceptual Engagement: The player will have an interface, which represents a spiritual communication with the Master, this will allow him to design and see the different results between the different options of questions.

Critical Engagement: Depending what kind of questions you make, the interview will have different results, depending on the quality of the interview the player will receive different materials and depending the materials, it will be a different result in the flag which affects somehow the context in which the game is taking part.

Playable Digital Prototype - Level 3:

For further phases, the idea is to make a multiplayer game in which every player will play with different characters with their own missions; they will have to apply different ethnographic skills (observation, interview) to complete their task and organize the information (emphatic charts, personas chart) to reach their own goals and finish the game.

References

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