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HOW TO CREATE A SERIOUS GAME?

ERASMUS+ | COOPERATION FOR INNOVATION

WRITING A SCENARIO

In video games, narration generally occupies a much smaller place than in a film or a book. It is limited to the hero, his mission, his opponents and the context. The universe of the game can be realistic or abstract, in the future or the past, in our world or in an imaginary world, but it's important to be coherent. The hero's trajectory is simple but powerful (saving the princess, restoring the balance of the forest, decreasing pollution) so that the player knows unambiguously what he must do and why. The higher the stakes, the more involved the player is in the story. We must also keep in mind that the story is told in the background and through actions as much as through words. This means that great attention must be paid to the hero's abilities, which will also be the player's, and also to the graphics of the game..

CREATING A PROTOTYPE

It is very difficult to know if a video game idea is going to be a success or a failure. As great as an idea may look on paper, there is always the possibility that the end result may not be fun. This is why, during the development of video games, it is necessary to first identify the strongest uncertainties, then to create prototypes to reassure oneself. In the case of a game that relies on the player's control of the gravity applied to objects, it is impossible to know if this mechanics will be fun before testing it. A prototype focused only on this mechanics (no graphics, no history, no sounds, nothing) will test this idea and improve it. In this project, the uncertainty was about the students' ability to develop a platform game with Stencyl. So they have prototyped the platform game with Stencyl and will be able to draw the necessary conclusions.

A prototype is playable and integrates a good part of the functionalities planned with the pupils. It will be continuously improved and completed.

This prototype has two main usages:

LET'S PLAY GREENER

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- check that the direction taken is the right one and readjust it if necessary
- define the next step to be taken and the list of tasks to be accomplished.

ORGANIZING PLAYTESTS

A game session allows you to evaluate what works and what does not work in the prototype. All those who took part in the creation of the game participate and manipulate the game from start to finish. The observations must concern the graphics, the sounds, the controls, the narration, but also the overall coherence of the game (do all the elements go well together?) and the clarity of our intentions (do we as players understand the goal and the message of the game?). Ideally, a focused conversation should be conducted with all learners and a questionnaire be completed individually.

For each game, it is advisable to continue improving the prototypes instead of directly attacking the next version of the game. We can see this stage as a series of experiments.

WHAT COULD THE PLAYER HAVE LEARNT FROM THE GAME?

Teachers define this aspect in terms of precise notions and use simple sentences. It is important that teachers should not try to say too much as there is the risk of affecting the player's commitment. A game is not a lesson, a game is emotionally engaging, and this commitment comes through action and not through reading the content.

Ex: water pollution exists. It has a bad impact on our health. It concerns both surface water and groundwater. etc.

HOW IS THIS LEARNING ORGANIZED THROUGHOUT THE GAME ?

As in any learning path, knowledge should be organized so that the player should come in contact with it in the order that makes sense to him. This order must respect the gradually increasing difficulty of the concepts discussed, their logical links and the narration of the game. These notions must be learnt step by step to



allow their comprehension. The amount of information transmitted in a game is necessarily a limited one.

HOW IS THE CONTENT TRANSMITTED?

These notions can be transmitted by text but also through the graphics of the game. In general, the less text, the better. You should also avoid taking the player out of the story or game by saying "did you know that". An effective way still remains the dialogues with characters met during the game, characters who tell how their daily life has been altered and the problems that he faces. If the main character's will to fulfill his mission is strengthened, it is even better.

Willingness to make a game fun and the one to transmit content tend to clash. In truth, combining these two wills just requires effort. The key is to see the game experience as an opportunity to explore specific knowledge. The more thought the writers have given to backgrounds, characters and obstacles that express sustainable development issues, the easier it will be for the player to learn about them.

PLAYABILITY

In a game, it is necessary to distinguish between the obstacles which were placed consciously by the creators of the game in the goal that the player should find ways about how to overcome them, and the obstacles which come from a defect of conception. In the latter case, we speak of a playability defect. Most of the time, the playability defects come from a lack of information on the procedure to follow or from a counter-intuitive manipulation to carry out. To ensure the playability of a game is to be able to put yourself in the player's shoes, to imagine that you know nothing about the game, and to plan an experience that matches your abilities, which amounts to:

- providing simple and intuitive controls
- anticipating the player's learning curve and
- supporting its path with discreet but explicit indications

The 3 rules :

- Well thought out controls are easier to learn
- A good notion is one that comes at the right time
- A well posed problem is a well learned solution



Whenever possible, let the player learn for himself rather than tell him how to do it. For that, the role of the game creator is to prepare calibrated obstacles with a precise objective which can be to teach the player how to jump, walk, shoot, etc.. The role of the player is to understand how to progress in the game, even if it means unconsciously noticing the clues that the game designers have left in the background for him.

IMMERSION

Immersion

Video games are immersive, which is a well-known fact . Once the players are captivated, we can make them learn everything we want from what is said, yet it may not be that simple.

Immersion has to be gained. The player must believe in the universe that the creators of the game offer him in addition to having a good reason to go to the end of the game. Unfortunately, there are many reasons to get out of the game and turn it off. How do we avoid that?

Through a familiar but not a too familiar universe.

It is necessary to find a way so that the player should feel involved from the first seconds of the game, by making him dream with unusual elements while being able to pose him questions that affect him closely. That is why many stories speak of universal things like the love between a parent and his child, the ability to outdo oneself, the fight against injustice. They do it while exploring unknown and perilous universes.

A coherent universe

It is very important that the elements of the game (main character, weapons, backgrounds, enemies, allies) should form a coherent whole together. Even if not everything will be explained in the game, think of providing an explanation, a logical link between each of the components of the scenario. Do not hesitate to invent a science or a mythology to support the technologies or the magic used by the player. This is what we call the creation of fictional worlds which must be done even if the universe of the game is the same as our universe.

A dense universe

Use all possible means to make the story exist. Part of giving it substance is through the details in the background and the dialogues. You can also use a narrator. Without forgetting that there may be hidden messages in the designed actions that the player should understand.

An oriented world



If the universe can be rich and deep, as much as your illustration skills allow, the story must be told in short sentences that expose the situation and its stakes, even if that means using common expressions. My advice is to take inspiration from the hero's journey as described by Joseph Campbell. No need to develop all the stages in the games, some lend themselves more than others.

1. The Hero in His Ordinary World: This is an introduction that will highlight the extraordinary characteristics of the adventures that he will follow.
2. The call to adventure, which presents itself as a problem or a challenge.
3. The hero is reluctant at first, afraid of the unknown.
4. The hero is encouraged by a mentor, a wise old man or somebody similar. Sometimes the mentor will also provide a magic weapon, but he will not accompany the hero who must face the trials alone.
5. The hero crosses the "threshold" of adventure, he enters an extraordinary world, he can no longer turn back.
6. The hero undergoes trials, meets allies and enemies.
7. The hero reaches the most dangerous place, often in depth, where the object of his quest is hidden.
8. The hero undergoes the supreme test, he faces death.
9. The hero seizes the object of his quest: the elixir.
10. The way back, where sometimes it is still a matter of escaping the revenge of those from whom the object was stolen.
11. The hero returns from the extraordinary world where he ventured, being transformed by experience.
12. The return to the ordinary world and the use of the object of his quest to improve the world (thus giving meaning to the adventure).

Step 6 covers the action of the game and the rest is in the order of introduction and conclusion.

THE LEVEL DESIGN

In a platform game, platforms, enemies, obstacles and collectibles must be placed to create a course for the player. Attention must also be paid to the arrangement of information and scenery elements. Nothing is placed randomly, everything is arranged to challenge the player, to transmit content on sustainable development and to tell him a story.

The corresponding reflection is what we call the implementation of the level design, that is the conception of the game levels.

Cut levels into scenes



To facilitate the reflection, I advise to divide the game into levels then to divide the levels into scenes. So, scene by scene, it is easier to determine what the player is learning and what elements are placed in the scene to guide him along that path.

Distribution of learning

As we have seen before, the player must learn game controls, sustainability and game history. Be careful not to approach too many new concepts per scene but cut them out so that they should be as small as possible.

The convergence of learning

Each scene has an educational objective to achieve or a passage in the story to address or a new element of gameplay to present to the player. These three aspects (gameplay, pedagogy and narration) must meet as much as possible, i.e. the acquisition of the double jump (gameplay) must be explained by the narration and allow to approach a new aspect of sustainable development.

The level design is done in two steps. The first is to draw the scene on a sheet of paper of the right size. All important elements must be specified such as obstacles, a character, a series of platforms, an enemy, etc. Then, the developers should integrate them into Stencyl.

Test the level design

Of course, once the level design is integrated, the designer must test it and make sure it works as expected. Adjustments can be made to get closer to the original intent. But we can't stop there! It is important to have it tested by people who see it for the first time and do not know the intentions of its creator.

Finally, the graphic designers and sound designers will take care of "polishing" the scenes, i.e. creating sounds and graphics that serve the game's purpose as much as possible.

Level design is an important component of a platform game.

It allows to visualize it on the length, from the beginning to the end, with all the obstacles that the player will have to face and overcome in order to become a better version of himself.

