

Game balancing theory

Previous compulsory steps / Prior students' knowledge	Definition of genre of the game, Definition of the character
Learning objectives	Learning about elements of game balancing.
Subjects	English as a foreign language, Economics, Psychology
Recommended Age (10 – 14) or (15 - 18)	All
Material needed	Video display, internet access
Sequence duration	60 minutes
Individual or group activity	Group activity
Skills developed (after learning objectives)	Writing, Creativity
Tips for shorter duration	This sequence should not take more than an hour. However, to make it shorter if needed you can give the information given in the videos yourself in a summarized way.
Tips to make the sequences more accessible or inclusive	The videos used in this sequence are in English with subtitles. You could also use the auto-translated subtitles for additional languages. To make this sequence as inclusive as possible you could consider explaining the videos to your students while showing them in class, or share the script of the videos with your students beforehand.

Step by step: how to implement the sequence

- **Step 1 – Reflecting on the necessity to balance a game (15 minutes)**
 - **Gameplay and balancing**

To realize why balancing is important we must ask: what is good gameplay?

Show this video about decision-making in Doom Eternal to your students:

💡 ['The 4 "P"s of DOOM's Amazing Combat'](#) by Game Maker's Toolkit from 4:00 to 9:58.

Ask your students what is needed for good gameplay based on the video.

→ Good gameplay is all about making choices

Game designer Jesse Schell's defines what a game is as taking a "problem solving approach playfully".

In an unbalanced game, choices are offered to a player, but one of them is clearly better than the rest. This is called a **dominant strategy**.

Ask your students why game balance is important. → Gameplay is all about making choices. In a poorly balanced game, many of the choices available to the player are essentially rendered useless.

- **Flow**

Show your students this video on flow:

💡 ['What is Flow Theory? What does this mean for our students?'](#) by John Spencer.

Ask your students if they have ever experienced flow. Can they describe the activity?

Our goal as designers is to produce on the player a state of sustained focus, pleasure, and enjoyment.

Ask your students why game balancing is important for keeping the player in the flow. → One of the factors needed for flow is a **match between challenge and skill**, this is what balancing aims at.

Ask your students what concept in games revolves around matching the player skill vs a presented challenge. → It is difficulty.

- **Step 2 – Reflecting on difficulty (10 minutes)**
 - **Skills**

Ask your students which skills are used in video games. You can display this video extract on mute to inspire them:

💡 [‘Difficulty is passed’](#) by Game Next Door.

→ Most of the time we think about psychomotor skills: the capacity to enter inputs correctly. But modern video games harness our cognitive skills: observation, time and space mapping of an area, logic, experimentation, adaptability, memorization, team skills in online games.

- **Challenge**

We have seen that keeping the player in the flow, i.e., between anxiety and boredom is important. Let us compare different ways to stay in the flow:

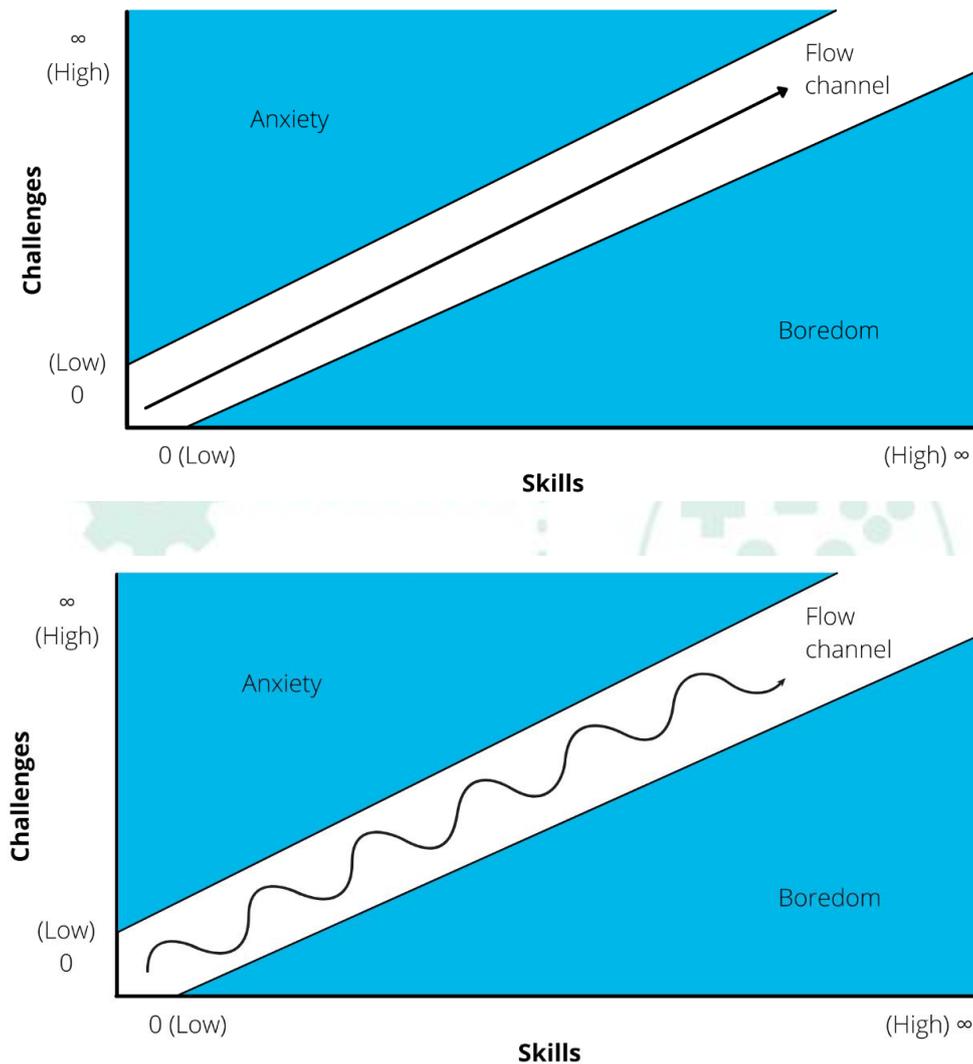


Figure 1: Different types of flow

Ask your students what difference there is between the two graphs.

→ In the first graph challenge and skill progress simultaneously, keeping the player in a continuous state of arousal, which can be depleting. In the second graph, it is a cycle of tense and release where increasing challenge is followed by an easier period of less challenge but soon enough, the challenge ramps up again.

Ask your students what can produce this period of easier challenge without modifying the challenge itself (enemies, puzzles, platforms...). → A reward: knowledge, skill or item that boosts the player's stats or gives her a new ability. But it also can simply be the increased player's mastery through learning.

Ask your students what they think the player feels during this easier period. → The challenge becomes a relaxing activity where the player feels great and experiences a sense of progression.



- **Step 3 – Practicing difficulty design (10 minutes)**

Ask your students to consider a videogame that features a gun that lets the player destroy enemies if they shoot them three times. As they proceed through the game, the enemies grow more numerous, increasing the challenge and creating a tense moment. If they rise to the challenge, though, and defeat enough enemies, **what could we do to create a release moment?**

→ We could reward the player with a gun that lets them destroy enemies with only two shots.

This easy period must not last in order to keep the player in the flow. **What can we do to create a tense moment by taking the challenge to new heights?**

→ Present the player with enemies that take four shots to destroy even with their new gun.

Ask your students to consider these two boss fights:

- The boss will randomly kill a player every 5 to 10 seconds without any kind of warning
- The boss will place a deadly void zone at the player's position every 10 seconds, which will explode after 3 seconds and kill anyone on top of it

Which one do they prefer? Why? → The first one is very punishing, and there is nothing the player can do about it, no matter how much skill they have. But if we look at the second boss, we have many elements that promote learning: there are cues the player can react to, increasing their skill in dealing with it

Ask your students what we should do if the player fails at a challenge. → There must be feedback. The player must feel there was something better they could have done not to feel frustrated and helpless. They must learn from failure. To do so, we should present cues, visual, audio, vibration, etc., that signal the player something is about to happen. It gives an opportunity to react.

To see practical examples of the importance of balancing difficulty in games, you can take a look at the classic-looking platform games created during the project's workshop, whose difficulty level and curb vary greatly.

<https://www.gaming4skills.eu/workshopgames>

References

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