D-ESL

Inclusive video game design ideas for a language course
Inclusion Guidelines when making a Video Game

Game subtitles and visual guidelines for DYS and hard-of-hearing players

Introduction

Good, readable visual cues help make an enjoyable game for everyone. But it can benefit players with Dys even more, as these players may have problems with reading some texts or navigating a visual environment crowded with stimuli.

Why are these guidelines needed?

Sounds are critical for some game aspects: dialogues, navigation of a 3D environment, and sound cues that indicate a state (a sound validating an action or a piece of music indicating moving forward in the story/enigma). They must be supplemented with visual help.

Guidelines

Audio cues replacement

Don't make sounds the only way to understand what's happening in the game.

Use subtitles also for environment elements in an approach similar to movies'. If there is a growing menacing wind in your game ambience, display a subtitle saying "[menacing wind grows]". Use audio feedbacks that informs on the game state (display "door clicks open, hopeful music swells" for example).

Indicate who's speaking and their direction according to the player's position if possible.

Best example: Fortnite mobile: a ring in the middle of the screen symbolizes the sounds and their directions.

Figure 1. Example of audio cue replacement in Fortnite (source: phonearena.com)

User Experience (UX) vs User Interface (UI)

UX

User Experience (UX) is the information architecture of the game, where to store and how to access information. The point is to make information accessible without too many interactions and cognitive load.

UI

The User Interface (UI) is composed of the visual elements that help the player navigate and interact with the game: icons, health bars, waypoints… UI follows the principles of visual design to make information easy to understand and act upon.

Motion graphics

Movement, changing colours, and animations of the visual elements enforce the messaging of information, guides the player, and give feedback when interacting with the interface.

Visual design principles

Using a graphic charter

One should aim for consistency, without it the player needs cognitive effort to adapt to the ever-changing interface. Before starting to make windows and interface elements, one must set some rules concerning colour, text, the position of elements, typography, and iconography. What should they look like when selected, hovered, or clicked?

Layout

The layout is about organizing the visual elements: how to arrange and combine them in a cohesive way using intuition. For example, putting the name of an enemy close to a health bar means that's the enemy's health.

Motion graphics principles

Responsiveness

Interactions should be fast, and the clicking should feel fluid.

Intention

The player's focus and attention are guided toward specific paths to simplify navigation. For example, a downward motion of a menu leading to a bottom button.

Awareness

Elements behave in a way that is dependent on their surroundings.

For example, a health bar is displayed above an enemy when looked at or a tooltip text appears over the element that the player hovers with the mouse.

Consistency

Elements react in a cohesive manner everywhere in the game.

Physical intuition

A heavy object should move slowly and be hard to stop. Use your intuition on gravity and weight to help you convey meaning as well as the [12 principles of animations](#).

Dys friendly User Interface (UI) principles

High contrast and dyslexia don't match well

Use pastel backgrounds instead of high-contrast colours. Prefer dark grey texts instead of black when using a white background.

Be careful with fonts

Dys-friendly fonts have increased line spacing and distinct typographic elements for letters. Ideally use the Dyslexie or Open Dyslexic fonts. Otherwise use sans-serif fonts (Arial, Open Sans, Verdana…).

If possible let players change the font.

The font size should be over 12.

Keep the text short

Don't go over 45 characters per line.

Don't overload the text style

Use bold but not italic nor underlining, as they change the overall shape of the letters and make it unnecessarily hard to read for players with DYS.

Incorporate readability tools

Use text-to-speech tools. Whether third-party tools or self-made audio clips of someone reading the lines.

Split functionality

Don't cram too many features into one screen, either separate screens/menus or have the screen clearly split.

Allow customization

Ideally, let the users choose fonts, text magnification, text and background colours.

Empower text with graphics

Support or replace texts with icons, as it makes reading more enjoyable and information retrieval easier.

Conclusion

Whenever possible, supplement sound with visual cues. To design a good UI, follow graphic design principles and add the dys-friendly guidelines provided not to let players on the side.

Resources and references

- Redka, M. (2019, April 5). UI/UX Design for Users with Dyslexia. Retrieved from http://www.instantshift.com/2019/04/05/ui-ux-design-for-dyslexia-users/

- [Riot Games]. (2018, December 13). 'So You Wanna Make Games?? | Episode 9: User Interface Design' [Video File]. Retrieved from https://www.youtube.com/watch?v=sc3h5JXtIzw
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Images

(n.d.)? (n.d.). Example of audio cue replacement in Fortnite. https://i-cdn.phonearena.com/images/articles/318807-image/fortnite-mobile-interface-indicators.jpg

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