Module 3, Unit 4, Activity 1

Emotion Hero

Overview

Using an EEG wearable, players enter a new world of emotions. In this role-playing game (RPG), traversing different "chapters", the players will learn about the complex inner world of emotions by emulating and recreating them as well as observe and make choices on their behavior and its influence on others.

Instructional Objective

Students will be able to

1. Recognize and regulate emotional states of 'Excitement', 'Engagement/Boredom', 'Frustration', and 'Meditation' at varying degrees.
2. Make choices on their behavioral responses when in a particular emotional state, and thus learn about the influence of their behaviors on others and understand social and ethical norms of behavior

Learner Profile

- Secondary school, 13-15 year olds
- Chinese and Korean students
- Mid to high socioeconomic status

Motivation

The game is designed for Bartel's (1996) motivational archetype of Achievers. These players prefer to gain "points", levels, equipment and other concrete measurements of succeeding in a game. The game can be played as a single player with a public scoreboard as well as a multiple player option where they they interact with other players in their cohort.

Context of Use

The game is geared to promote Social and Emotional Learning (SEL): http://www.casel.org/social-and-emotional-learning/: "Social and emotional learning (SEL) is the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions."

Object and Scope of the Game

This is a non-zero sum game. There is no definitive win condition. There is a level based progression. Phase 1 will have 5 levels.

Each level is a scenario. Activities within the level are a mixture of task based and time based. The players can play single/multiple player games.

The Emotiv EPOC headset uses seven pairs of electrodes that the following emotional states: Excitement, Engagement, Frustration, and Meditation.

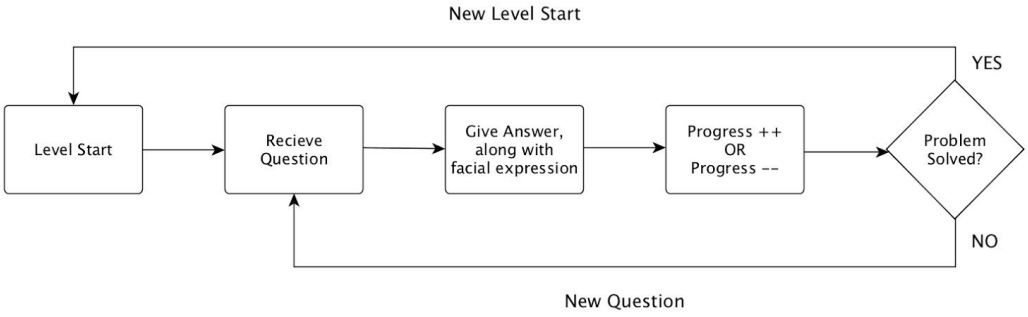
Design Details

Role of the player – Level 1:
In the first scenario, the role of the player is that of a salesperson, where the player needs to use his/her real world knowledge of a product, like a bicycle, in conjunction with dialogue and facial expressions to try and make a sale to various NPCs (non-playing characters) that the game sends their way – in this case students from his peer group – 13 to 15 year olds.

Walkthrough of Level 1:
The game follows a narrative based question and answer format.

1. A new level begins
2. The player character is approached by a NPC
3. The NPC asks the player a question (in text / audio format)
4. Players have multiple choices of answers to the question or puzzle. They can answer through facial expressions, trigger states, or touch.
5. Correct answers, increase the progress while incorrect answers decrease it
6. After answering a question, the NPC will have a reaction, and a new question or puzzle
7. When the progress bar is completed, the level is completed and a new one begins
8. If the player gives too many incorrect answers, the level is failed and the player must restart the level from the beginning

Player Input (Controls)



Emotiv Brainware Device
Using the emotiv brainware device, the game will be able to detect different facial expressions of the player, such as:

- Blink
- Right Wink / Left Wink
- Look Right / Left
- Raise Eyebrow
- Furrow Eyebrow
- Smile
- Laugh
- Clench
- Right Smirk / Left Smirk

These expressions of the player in the real world, will in turn reflect on the player's avatar in the game.

The questions are also designed to trigger the following emotional states, detectable by Emotiv.

- Excitement (mid, less, more)
- Engagement/Boredom (mid, less, more)
- Frustration (mid, less, more)
- Meditation (mid, less, more)

iPad (touch screen) input

- Touch will be used for context sensitive input from the player.

Game Mockup Screen:

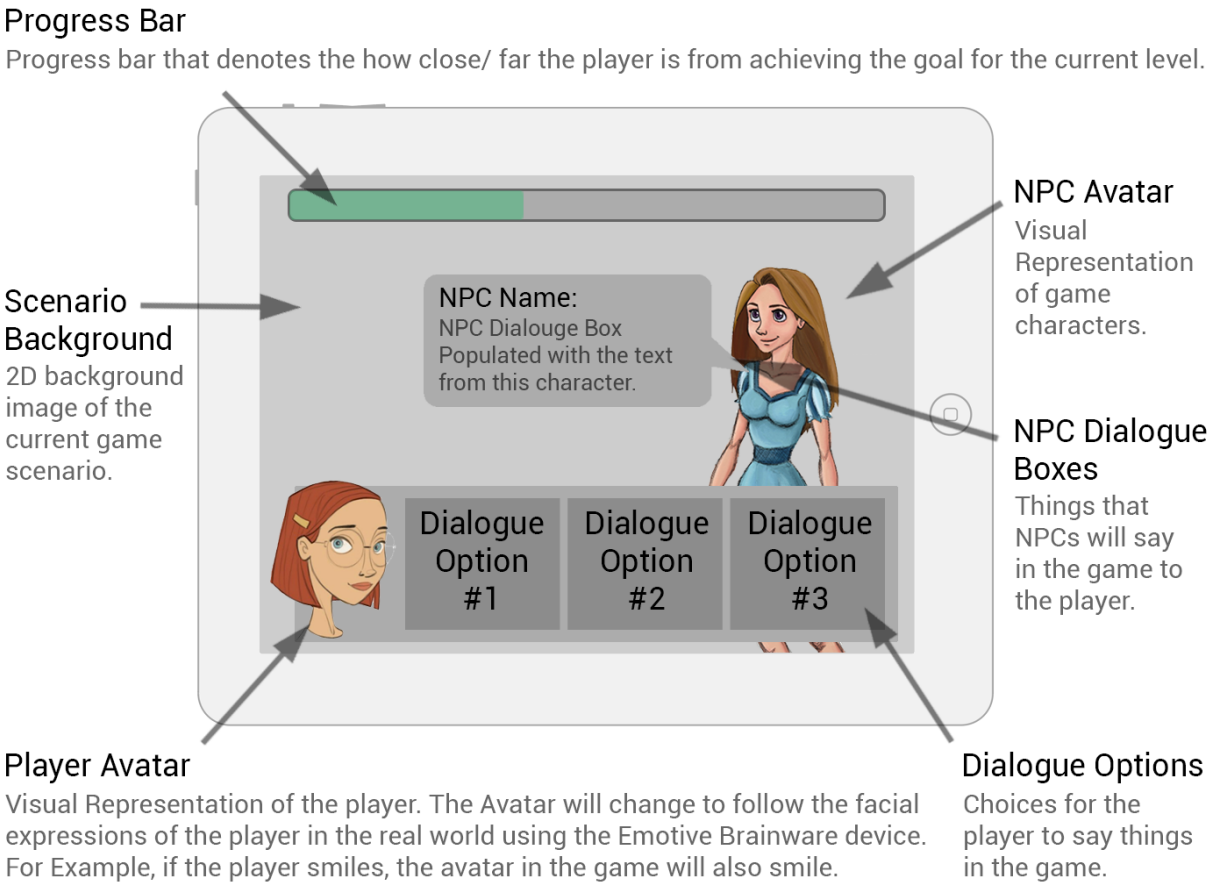


Image reference for characters:
https://litchicblog.files.wordpress.com/2014/06/a86731cb6c852ee68f90ff532c472d31.jpg
https://raulreyesfinalproject.files.wordpress.com/2013/01/final_allviews_keira_crop-copyforblog1.jpg

Universal Elements

- Photorealistic images
- Videos
- Sounds

Technical Elements

- Development Platform: Cocos 2Dx
- Platform: iOS (iPad / iPhone)
- Hardware: Emotiv Brainwear: http://emotiv.com
- Screen size: 1280 * 720
- Bit depth: 64-bit (to achieve photorealism)
- File formats of graphics: .png
- File formats of sounds: .wav
- File formats of videos: .mp4
- Naming convention: Camel Case

Design Process

The initial motivation behind this activity is to use the EEG wearable to make learning about emotions an interesting activity and thereby also develop empathy. The process to be followed is as follows:

The current stage is the specification's document.

References

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