Gamification – Team 2

Overview
Gamification is a new concept being tested to see if it can help students learn more efficiently. Previous IE Capstone students had designed games for IE classes based on areas that the professor and/or TA noticed students having problems in. Two of these games, DungeoNIOSH and Bake-Off 453, were chosen to undergo user-testing and subsequently critiqued based on gamification, education, and the user-interface. Surveys were created to critique the games and from the results, redesigns were proposed for both.

Objectives
The first objective was to design the entire user-testing process for the games in order to submit an Internal Review Board (IRB) application and have it approved because user-testing could not be done until this was completed. Once the IRB application was approved the second objective was to user-test the games and based on the results, redesign them.

Approach
- Choose two games from list for user-testing
- Tested games within group to determine problem areas
- Designed survey and pre/post test to critique games
- Created testing procedure and the target number of participants
- Completed and submitted IRB application
- Revisions to IRB were made until application was accepted
- Games underwent user-testing
- Results from the survey and pre/post test analyzed
- Redesigns for both games proposed

Outcomes
- Avg, Pre-test score = 3.08 / 6
- Avg. Post-test score = 5.18 / 6
- Increase of 2.1 points from pre to post-test
- 15 / 15 found it to be helpful way of learning
- 14 / 15 would try and beat classmates
- 8 would frequently use the game
- Timer added to Bake-off game
- Character page with avatar, stats, and achievements added to both
- 30 sec penalty for a wrong answer added to both
- Cheats added to both games, 15 sec penalty each time one is used