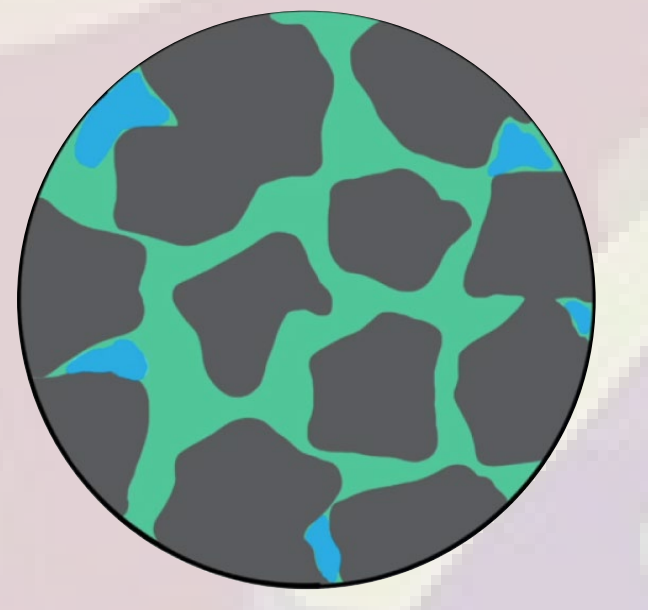


PETRO SOLVE



An interactive, cooperative, and engaging video game to aid in teaching petroleum engineering concepts and beyond.

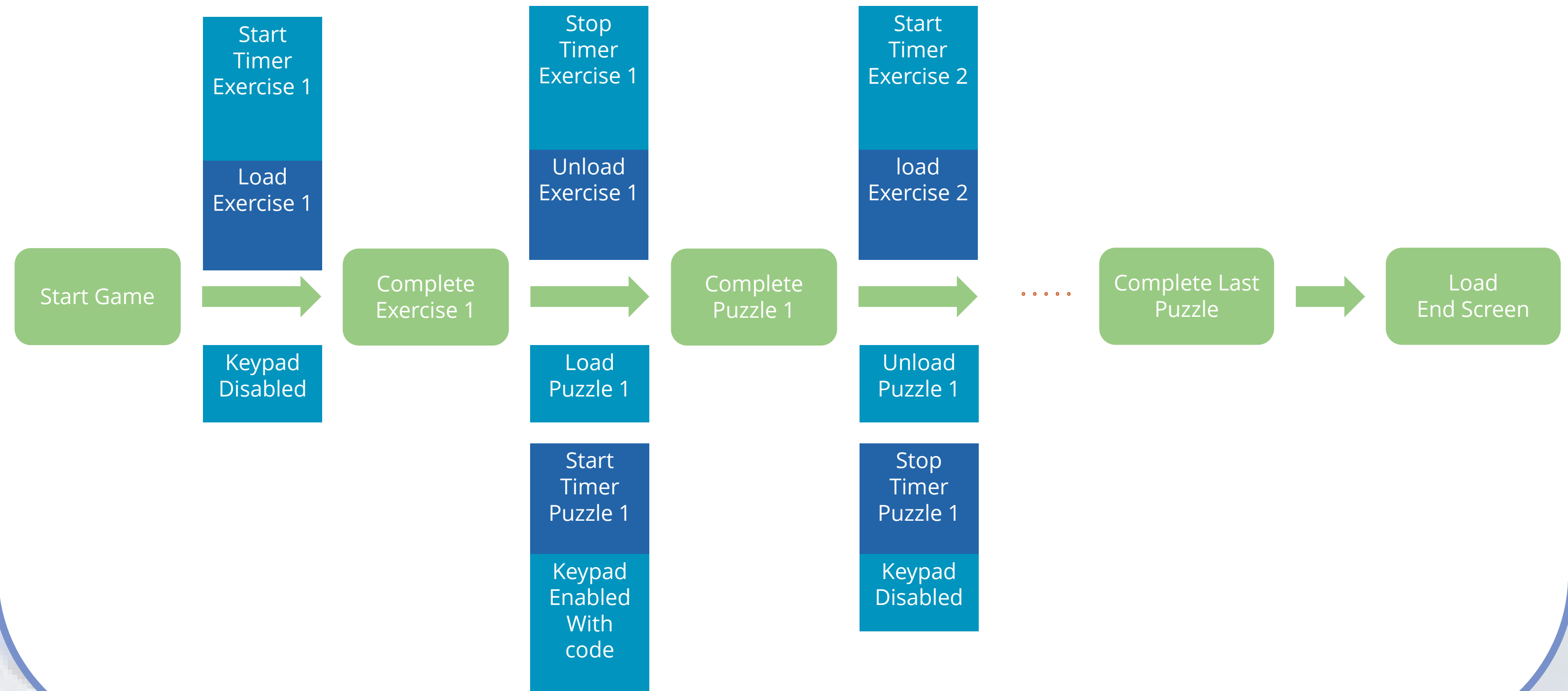
LPI: Nayef Alyafei USR: Rand AlAgha

Background

This project aims to explore the potential of implementing **game-based learning** in teaching Petroleum Engineering. More specifically, an escape room style game that aims to help teach reservoir petrophysics. Based on testing conducted for this version of the game, a number of benefits were found.

1. The game offers a unique collaborative solution to remote teaching measures.
2. The escape room format consisting of technical questions paired with fun puzzles strikes a perfect balance between academia and amusement to help enhance student engagement.
3. The game's simple interface can be easily adapted to other engineering disciplines with room for creativity to tailor the experience to a particular theme.

Game Layout



Game Screenshots

Game Interface:

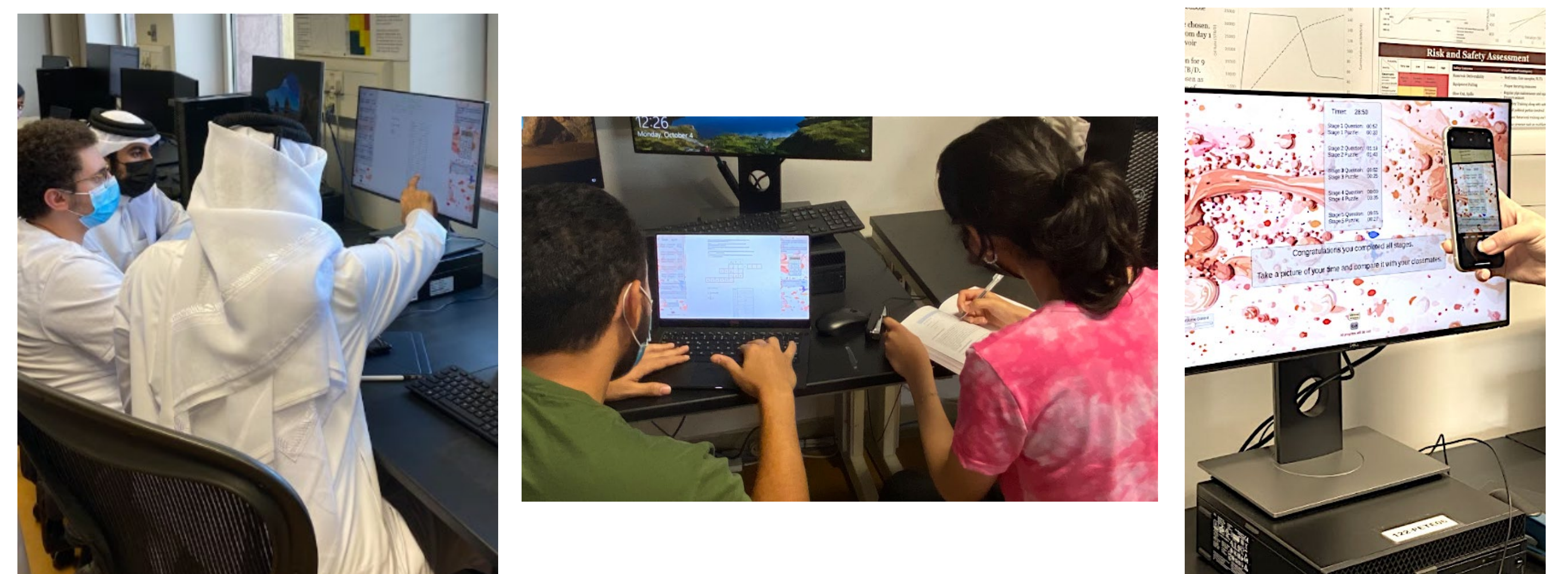
Technical Question

Puzzle

Crack the code

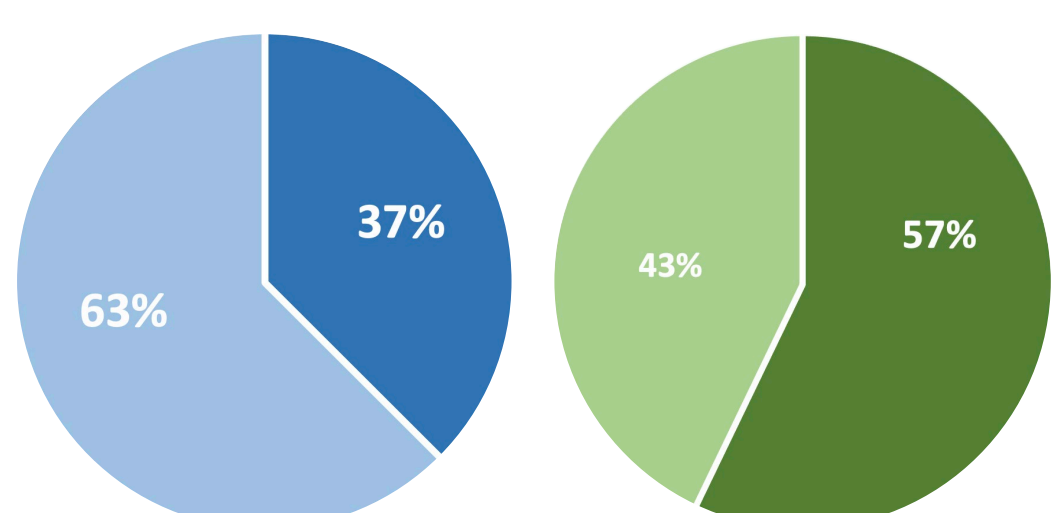
Repeat! →

Game Implementation

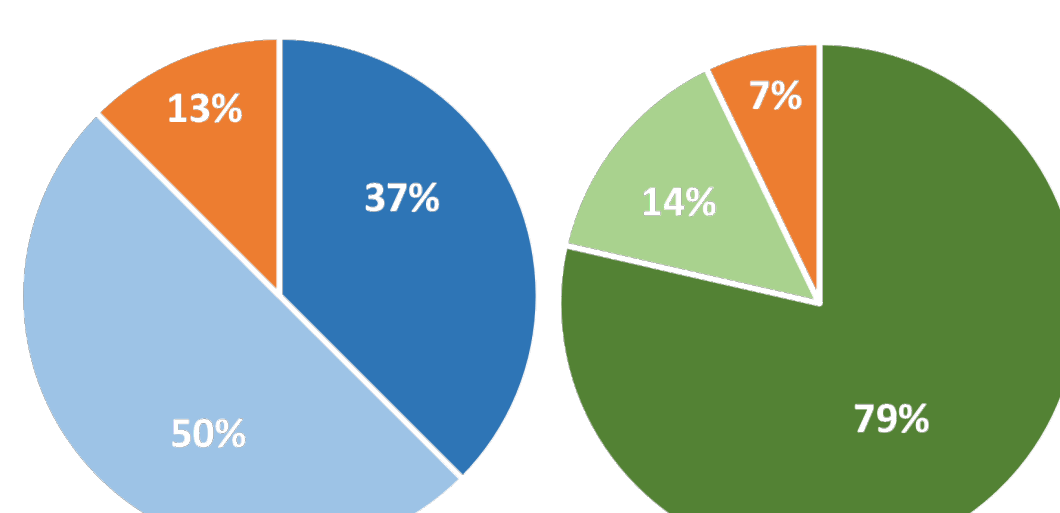


Survey Feedback (Statistical Analysis)

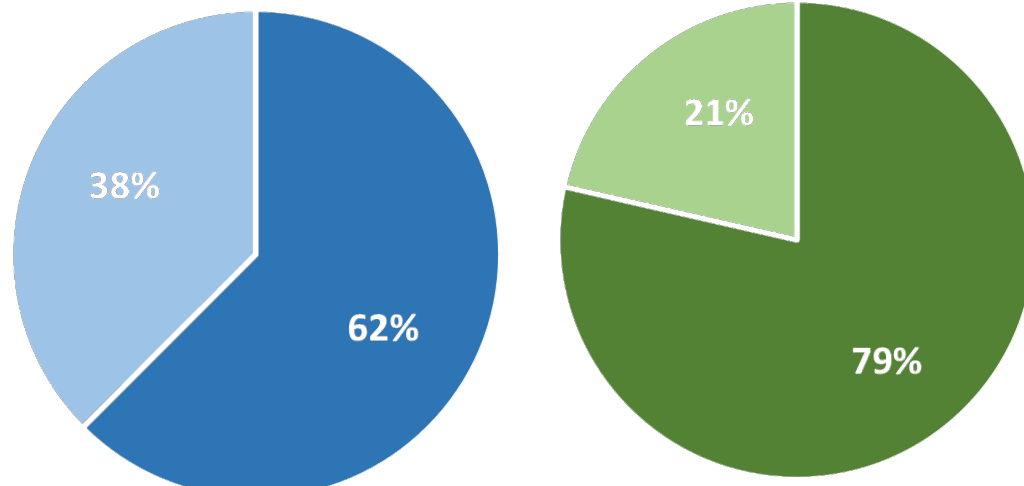
This activity helped me strengthen my understanding of the concepts



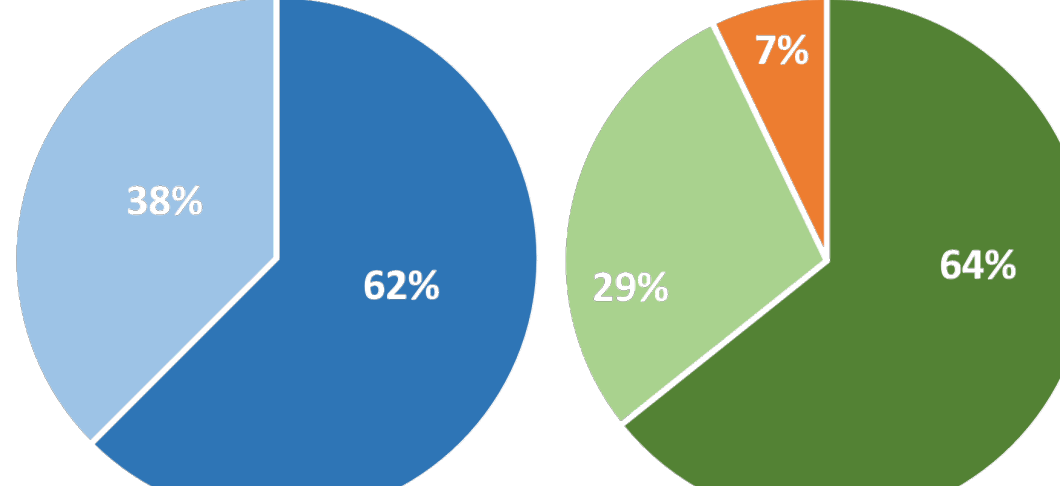
This activity allowed me to practice my teamwork skills



This activity helped me identify my weak points in the course



I liked the addition of the puzzles between each question



Trial 1: Via Zoom (8 Participants)

Strongly Agree (37%), Agree (63%), Neutral (0%), Disagree (0%)

Trial 2: In-class (14 Participants)

Strongly Agree (79%), Agree (14%), Neutral (7%), Disagree (0%)

Survey Feedback (Comments)



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