

Echolocation

Two Dimensional Navigational Wavelength

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Class:

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Summary:

Echolocation is a social game where players must attempt to understand each other's interpretations of words across different spectrums. All the players must cooperate to find their given target on the map using the least number of steps possible. There are 5 rounds, each with a new target. One player acts as a navigator while the other players give clues to direct them.

Materials List:

- Deck of 30 cards. Each card has two words on them (referenced as word deck later in the document).
- A game board with a map on the front and a scoreboard on the back
- A dry erase marker and eraser
- A deck of 64 cards with the locations on the board (referenced as location deck later in the document).

Game Rules

Number of players: 5

Setup

- The youngest player begins as the navigator.
- At the start of each round, draw 2 description cards from the word deck. Place the first card along the letter axis on the board (left). Place the second card along the number axis on the board (below). Make sure the echolocation logo on the card points to the board.

- Draw a card to determine the starting position and set it aside. Mark that square on the board as the start by writing a 0 in it.
- The navigator closes their eyes and the player to their left draws another card to determine the location of the target. Make sure everyone except for the navigator sees where the target is.
- Set the target's location card aside face-down (to refer to later if needed). The navigator can now open their eyes.

During Each Round

- Starting from the player to the left of the navigator and continuing clockwise, each player gives a clue to the navigator based on the two description card spectrums to guide the navigator to the target. Using the given clue, the navigator chooses any square to move to and marks that square with the current number of clues given (e.g. 1 for the first clue, then 2, etc).
- If the chosen square is not where the target is, continue onto the next clue. If it is, the round is over. Count up how many clues were needed and write it down at the top of the board as the score for this round.
- If each player has given 2 clues and the target still has not been found, the round ends automatically and the score for the round is the maximum number of points (8) plus 2 for not reaching the target square.
- At the end of the round, erase the map, discard the two description cards, and reshuffle all the coordinate cards. Then do the setup steps again for the next round, with the player to the left of the navigator becoming the new navigator.
- Discussion is allowed during each turn, but discussion about the target location or clarifications of clues are not allowed.
- After each player has been the navigator once, the game ends. Add up all the scores from each round to find your final score. The lower the number the better! Once you have your final score, you can write players' names on the scoreboard on the back of the board, under the score range you achieved.

Clues Rules

Clues should

- be a word or phrase
- not include any words on the cards or synonyms of them
- convey a single thought:
if the navigator needs to think about parts of the clue individually, it likely breaks this rule
- be something real:
it can be fictional, but it should be something that has already been invented

- not include numbers:
if numbers are part of the proper name, it is allowed (e.g. Star Wars Episode III)
- not be exactly the same as a previously given clue

Clue Suggestions

- Try to be concise
- Decide whether to give clues relative to the navigator's current position or based on the board being an absolute spectrum
- Example of a clue: If the two spectrums are cold ↔ hot and big ↔ small, and you want the navigator to move towards the cold side and the big side, you could give a clue like "tundra."

Process Summary

At the beginning of the development process, we played various social games like Wavelength, Chameleon, Just One, and Apples to Apples to draw inspiration. We came up with multiple ideas of what our social game should be, including: Translations (which would be similar to Wavelength with multiple dials), Intervention (which would be based around the social situation of a group intervention), social deduction with no lying (where one player would be an "impostor" but without knowing), and a grid based deception game (where there would be a grid board where each player gets clues and one player has less clues). We came up with a thought of combining translation and grid base deception.

The first prototype was called Pinata Golf, with the base idea of having a grid and two random pairs of opposite words, with one player navigating while the others give clues based on the word spectrums to direct them to a certain square. Each player would take turns navigating and work together to get the least number of steps to reach the goal. We started with a 9x9 grid, which we found was a little too large and made it difficult to hone in on the correct square.

We also tried to incorporate the idea of social deduction with no lying at first, by having a "chameleon" who would have a different goal square to the other players without knowing it. We wanted to capture a feeling of slight paranoia for each player, who wouldn't know whether they were or weren't the chameleon, and also force players to pay attention to other player's clues to determine who the chameleon might be. However, we found that this chameleon role complicated things too much, and we couldn't settle on rules for how it would work: would the chameleon be working with the other players or on its own? Would the game end if the chameleon successfully directed the navigator to their square? How would accusing the chameleon work? The role ended up adding too much noise to the game, so we scrapped it to focus on refining our original idea.

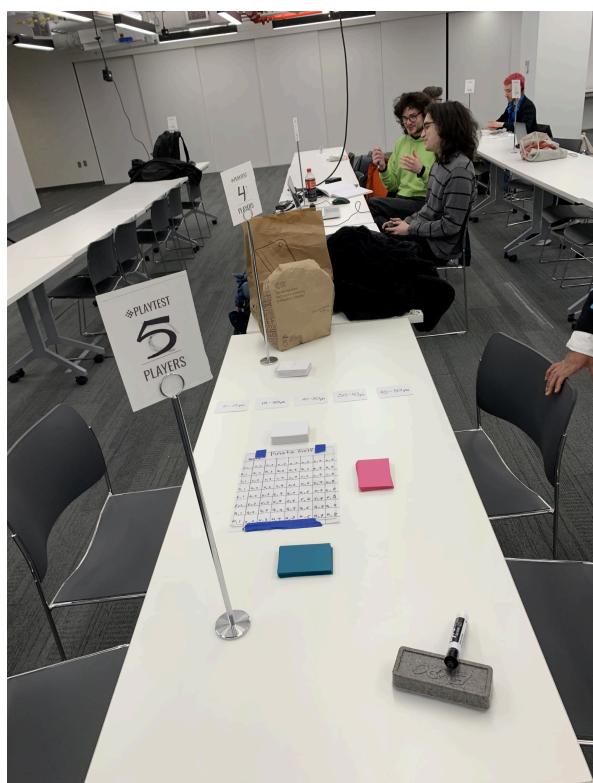
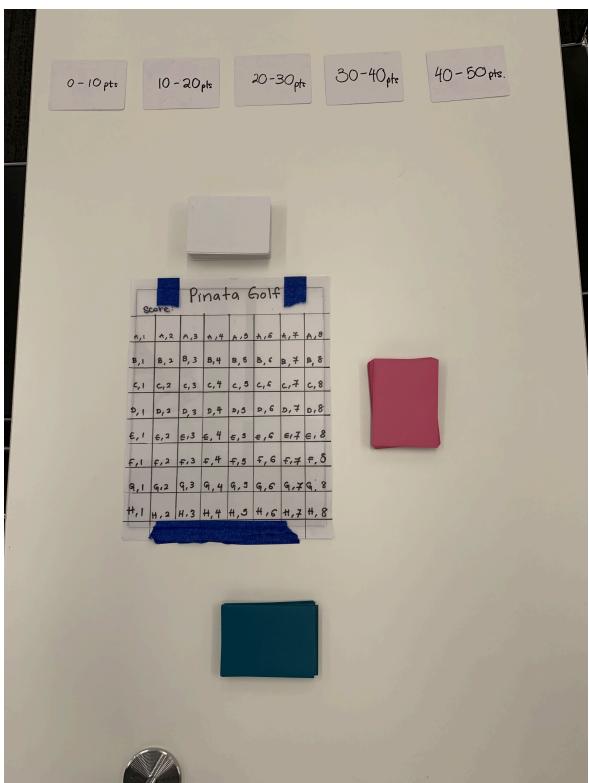
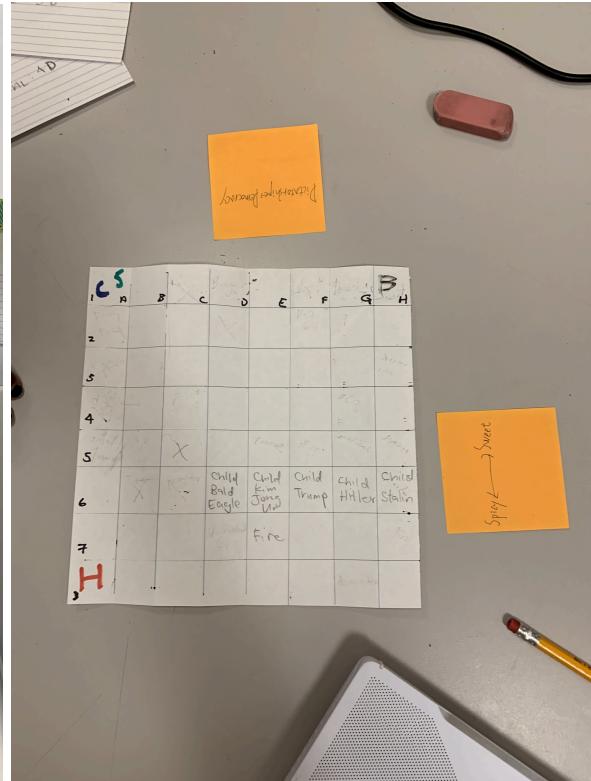
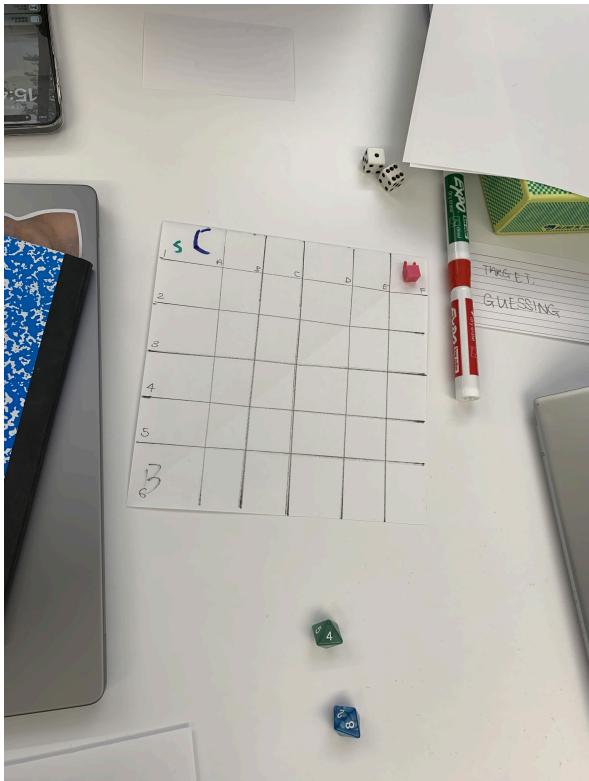
Next, we tried to finetune our rules, such as coming up with a system for points values and determining what clues should or shouldn't be allowed. We decided that points would be based on the number of steps taken each round (with an additional 2 points for not finding the goal), and the goal

would be to get the lowest score. We also decided that a round should end after each player has given two clues, players should be able to move as far as they want each turn, clues should not be related to the words given, and clues should be no more than 2 words. We also had rules for how clues should be relative to the navigator's current position and relative to the last clue given. We then came up with a longer list of adjective pairs, trying to lean into more subjective and abstract adjectives, since our original adjectives like hot/cold and big/small were a little too objective. With more subjective words, we could increase the social aspect of the game and force players to get inside each other's brains more to understand how they would think, and learn more about each other in the process.

We playtested with multiple different combinations of words, and found that playing the game more and more allowed us to build a language with each other over time, which was our goal for players. We began thinking about our materials and theming more as well, and printed out a grid that we would cover with an acrylic sheet and draw on with a dry erase marker, so we could have a whiteboard-type map to reuse. We bounced back and forth on themes, initially using a pirate/treasure hunting theme with an emphasis on the map, and later a potion/alchemy theme where players would work together to make a potion, and a good score would result in a better potion.

As we playtested more with the class, we began to loosen some of the rules, allowing players to decide for themselves what their clues should be relative to and increasing the word maximum to 3 and later removing the maximum entirely, so that players were less limited in what they could do and could focus more on building an understanding with each other. We also found that our theme was a little too disconnected from the actual mechanics of the game and was easily forgotten by players, so we came up with a more abstract theme that would mainly just aid us in visual design, coming up with Echolocation as the new name for our game. We took the game to Playtest Thursday to iron out confusions that players had with the rules, such as clue relativity, discussion rules, and rituals of reshuffling. Then, for the final game, we fine tuned the designs of the board and cards, created a scoreboard, and added suggestions in the rules for how players should orient their clues.

Process Pictures



score:

((echolocation))

A,1	A,2	A,3	A,4	A,5	A,6	A,7	A,8
B,1	B,2	B,3	B,4	B,5	B,6	B,7	B,8
C,1	C,2	C,3	C,4	C,5	C,6	C,7	C,8
D,1	D,2	D,3	D,4	D,5	D,6	D,7	D,8
E,1	E,2	E,3	E,4	E,5	E,6	E,7	E,8
F,1	F,2	F,3	F,4	F,5	F,6	F,7	F,8
G,1	G,2	G,3	G,4	G,5	G,6	G,7	G,8
H,1	H,2	H,3	H,4	H,5	H,6	H,7	H,8

results

excellent
5-10

great
11-20

fine
21-30

bad
31-45

yikes
46-50

