

Research Questions/Goals

Our research goals are to verify what we know about our target users are correct, and to find the answers to what we don't know. Hence, we based our research questions on the list of our predispositions. The questions are made more specific and concise, so we have a clear idea of what our interviewees should be asked. The information we collect will be used to define what the users want, and then prioritize our design decisions. Our research questions are listed below.

- How often will our target users use the poolShark app?
- Will it destroy the flow of a game if it is being used in real-time alongside an active game (at a recreational level)? Or will both users participate in using it?
- Will our users get the appropriate feedback to determine the exact placement location?
- Will the simulations and recommendations adhere to the player skill level?
- Will the application support different pool game types (eight-ball, nine-ball, three-ball, cutthroat, cribbage, etc.)?
- Do we need to add in extra coaching and technical suggestions, beyond the suggested moves, to make it more of a teaching app?
- What additional information beyond the basic elements of the application (skill level, game type, etc.) should be presented to the user?

Process

Two field interviews (one structured and one semi-structured) were conducted to retrieve useful data from target users, which are used for answering our research questions. In order to allow triangulation we kept our interview questions similar, but made sure the interviews were conducted by two different interviewers on different interviewees and at a different time and location to avoid bias

Besides the interviews, we planned to observe potential users while they were playing pool and take notes of the observations (e.g. how long different players take to strategize their next move, how many players of the total are noticed to be using a smartphone, if they're seeking suggestions from others, etc.). An 'in-the-field' observation was carried out in the MU basement of the OSU Corvallis campus at around 2:30 pm on April 24, 2017.

Structured Interviews

Situation:

Location

-Bar in Jaco, Costa Rica

The people in the space

- Who are they, what are they like?
 - Mostly middle aged men, with a few older men
 - Seem to be all Costa Rican
 - Seem to be white collar
- What are they doing?
 - Playing pool
 - Drinking alcohol
 - Talking/joking
- What do their emotions, purposes, and reactions seem to be?
 - Happy/ relaxed
 - Excitement/surprise when making a shot
 - Anger/regret when missing a shot
- What problems do they encounter with their activities?
 - Not being able to make a shot

The objects (technological and otherwise) in the space and with the people

- What are the functional elements of the objects
 - Pool table – game played on this
 - Pool stick – used to hit the balls on the table
 - Pool balls – hit by the stick in order to sink into a pocket of the table
 - Triangle rack – used to make sure balls are in correct starting position on table
 - Talcum powder – used on hands to make stick easier to use
 - Chalk – used to make stick strike the ball better
- What are the decorative elements?
 - Television
 - Posters/signs
 - Table lighting
- Which objects do people look for to interact with?
 - Pool stick
 - Triangle rack
 - Talcum powder
 - Chalk
 - Television remote
- Which objects do people bring with them that matter to the activities they are trying to do?

- Pool stick

The environment: spaces, architecture, lighting etc.

- What is the layout?
 - Medium sized room for a bar/pool hall
 - 3 pool tables
 - Dart boards
 - Stage
 - Bar stationed near the front
- What is the environment like?
 - Louder than outside (music playing, people talking/laughing)
 - Relaxed environment, not formal
 - Smells of food and beer
- How does it influence the activities people engage in?
 - Environment seems to help people relax and enjoy being there
- How does the environment support the objects above?
 - Relaxed environment that encourages people to have fun (play pool).

Structured Interview 1:

4/21/17

Interviewee information:

- middle aged male (approximately 40 – 50 years old)
- had short black hair and a mustache
- seemed in a good mood
- drinking a beer
- spoke English (first language is Spanish)

Question 1:

On a scale of 1 -10 how would you rate your skill level at pool? (1 = never played a game, 10 = professional player)

-7

Question 2:

Would you be interested in increasing your skill level?

-yes

Question 3:

How often do you use applications on your smartphone or tablet?

-On average, probably once an hour

Question 4:

If there were an application that helped you become a better pool player, would you use it?

-I would try it out. I would only keep using it if it really helped.

Question 5:

How often do you attempt to make trickier shots? (bounces, jumps, using english, etc.)

-Whenever I need to sink the ball that way. Probably 5 or 6 times a game. (looks at the others he is with, explains to them the question and his answer in spanish, they all laugh)

Question 6:

What types of pool games do you know?

-I know a lot of different types of games, but I stick with 8 ball.

Question 7:

What is your pool game of choice?

-(inferred from above) 8 ball

Question 8:

How often, when compared to your pool game of choice, do you play other types of pool games?

-I've only played the other kinds of games once or twice just to try them out. Most people want to play 8 ball, that's why.

Question 9:

If someone were coaching you on how to play better, do you think it would help you more if the coach were able to show you the exact move, if the coach told you exactly how to execute the move, or both?

-I think I would do better if I would be able to see how the balls would move. But I would want him to tell me a little about how he hit the ball too.

Question 10:

If you were able to track statistics regarding your pool game (% of shots made, % of games won, % of certain type of shot made, etc) would you be interested in doing so?

-Sure, if I didn't have to keep track of all that stuff myself. I think it would be interesting to know.

Structured Interview 2:

4/21/17

***Interview conducted in Spanish and answers translated to English.*

Interviewee information:

- older male (approximately 60 – 70 years old)
- had short gray hair and no facial hair
- seemed in a good mood
- drinking a beer
- uncle of interviewee 1
- spoke Spanish (all answers translated to english)

Question 1:

On a scale of 1 -10 how would you rate your skill level at pool? (1 = never played a game, 10 = professional player)

-(after thinking a moment) 6

Question 2:

Would you be interested in increasing your skill level?

-Yes, always!

Question 3:

How often do you use applications on your smartphone or tablet?

-A few times a day, just to see family on facebook.

Question 4:

If there were an application that helped you become a better pool player, would you use it?

-I am not very good with new technology, I don't think I would be able to use it well.

Question 5:

If not, why not?

-(inferred from above) not very good at using new technology

Question 6:

How often do you attempt to make trickier shots? (bounces, jumps, using english, etc.)

-I try to go with what is simplest, [but I use english a lot]. (I had to infer what he meant with his and gestures and the use of the Spanish word for spin "girar")

Question 7:

What types of pool games do you know?

-Snooker, 9 ball, I know a few other types. I almost never play them though.

Question 8:

What is your pool game of choice?

-8 ball is what I play almost all the time.

Question 9:

How often, when compared to your pool game of choice, do you play other types of pool games?

-Almost never. Maybe a few years ago.

Question 10:

If someone were coaching you on how to play better, do you think it would help you more if the coach were able to show you the exact move, if the coach told you exactly how to execute the move, or both?

-I think I'd do best if I saw the shot and he told me how he hit it. If I had to choose, I would rather he just told me, I think.

Question 11:

If you were able to track statistics regarding your pool game (% of shots made, % of games won, % of certain type of shot made, etc) would you be interested in doing so?

-I don't think I would care for that. I don't even keep track of who wins! (laughs)

Semi-structured Interviews

Interview 1

4/22/17

Situation: *Casual introduction, friend of a friend hanging out at a local bar playing a game of 9 ball. Asks for an interview about pool, while waiting for other people to play. Dim lighting and fairly quiet and empty. 3 pool tables near the corner of the bar. I used a semi-structured approach.*

Question:

Seems like you are pretty good, are you a competitor or just a casual player?

-Depends on the situation. For instance, right now I'm just trying to play and have a good time. My interests are not really playing as much as enjoying myself. I would say I'm a casual player who can be competitive.

Question:

I'm a casual player as well, I usually play against my friends, who are very competitive. What about yourself?

-We're competing against the same person, so yeah. We are always playing something and it always starts off really casual. Most of the time it becomes really serious and we all get into it. Right now, since this is the "warm-up" game, we haven't really tried. I do really hate losing to Anthony (mutual friend).

Question:

Well given the situation, what if I told you there was an app that would help you determine your next shot (in reference to pool)?

-That's an interesting idea. I determine it by just playing. There's no real methodical way I play, I just use my instincts. But I would be open to something that would help me. Actually, I have used an app to track my bowling, it helps me understand how I should approach a certain pin setup.

Exactly that! It would be similar but it would require you to take a photo so it can calculate how to approach it.

-Every turn? I think that would kill the flow of the game. Once we get serious, we wouldn't look to that. It might be considered as cheating since it's telling us what to do. That kind of thing wouldn't sit well with the other person.

Question:

I see, I agree it would definitely break the flow. But what about outside of the times you play each other?

-I would see the benefit of that. I watch tips and tricks videos on golf and bowling already, I guess this wouldn't be any different.

I've used those as well to help my game. Problem with those is that they are typically generic when it comes to teaching because there are too many factors in bowling and golf as they are all unique situations.

-You're absolutely right. They explain the best scenario, never the actual one. I think that would be a better tool since it uses actual placement. This game doesn't have as many outside factors like the others would (golf and bowling). That would just be for practice though, just like going to the (golf) driving range. I still can't see if that would be something real time.

I would agree. I was thinking of making it to support any type of game, maybe even adding coaching of some sort.

-Especially 9-ball. As long as it has that I'm okay. Probably my favorite type, although we do play team 8-ball a lot. The coaching part is interesting. Would it have something that could teach more advanced shots and techniques?

That's a possibility. Being able to learn how to correct backspin or jump would be helpful. It could create a multitude of potential shot options.

This is where I thanked him as it was his turn to play and had to end the interview.

Summary:

For a casual player, there would be a place for this app. He stated it would be just like going to the driving range. It makes sense, as it just assists you later on when a similar situation comes up. During the game, we both agreed that it would just destroy any flow and break the tension when the game gets serious. Features such as coaching or tips and tricks could be a good option for those wanted to learn those more advanced shots.

Observations

Situation:

Location: Memorial Union basement (OSU Corvallis Campus)

- The people in the space
 - Who are they, what are they like?
 - Mostly OSU students
 - OSU staff
 - A few elderly faculty members
 - What are they doing?
 - Performing indoor recreational activities
 - Staff assisting others
 - People chatting and laughing
 - How are they doing it?
 - Six people bowling in groups of two and four
 - Three people playing pool (two sharing a table)
 - Two people playing darts
 - What do their emotions, purposes, reactions seem to be?
 - They're happy and seem to be having a good time
 - A few bowlers and pool players get angered and frustrated on missing their shots.
 - What problems do they encounter with their activities?
 - Being indecisive on strategizing their next moves (some people take more time to decide than others)
 - Staff trying to monitor everyone's game time as they're charged by the hour.
- The objects (technological and otherwise) in the space and with the people
 - What are the functional elements of the objects?
 - Pool sticks, triangle racks
 - Bowling balls
 - Dart board
 - What are the decorative elements?
 - Floor is carpeted
 - Walls are painted orange and include beaver posters
 - Table lightings
 - Small lounge
 - Television
 - Which objects do people look for (perhaps to somehow interact with)?
 - Bowling balls

- Pool stick, triangle rack, powder and chalk
 - Lockers to keep their belongings safe before they start playing
- Which objects do people bring with them that matter to the activities they are trying to do?
 - Student IDs for receiving a discount on the games.
 - Nothing else really, as all the required game elements are already offered on spot.
- The environment: spaces, architecture, lighting etc
 - What is the layout?
 - Ten lanes, six pool tables, arcade games, shuffle board, darts, locker rentals.
 - What is the environment like?
 - A big open area with lots of lighting
 - All activities in the same space (you can see bowling lanes from the pool area, but they're in different sections)
 - How does it influence the activities people engage in?
 - Influences socialization.
 - Hard to decide which activity to participate in if they hadn't already decided before walking into the basement.
 - How does the environment support the objects above?
 - The environment is built to support people looking for fun at a recreational level, but are not for professionals as they can get distracted by other activities around them.

Observation notes

- Six pool tables, but only two are occupied (One shared by two people).
- Bowling area is more busy.
- The two people sharing the table look middle-eastern and in their early twenties.
- They're chatting in a foreign language and seem to be talking about the game.
- One player mishits and cries out of frustration and the other laughs at the situation.
- They seem to take longer making decisions on their moves as the game progresses.
- The person playing solo seem to take less time deciding than the other two.
- Two of the three players use a smartphone while the other is using a flip phone.

Results / Insights

Answers to our research questions

How often will our target users use the poolShark app?

Judging by the answers received in the structured interview, the group feels that the users would use the app during games in which the goal is practice, and not in competitive games. This is consistent with the response given in the semi-structured interview.

Will it destroy the flow of a game if it is being used in real-time alongside an active game (at a recreational level)? Or will both users participate in using it?

In the semi structured interview, the person would prefer not to use it as it would slow down matches a lot. Maybe even consider it a competitive edge and not a true test of skill. The user would use it like learning golf or bowling techniques.

Will our users get the appropriate feedback to determine the exact placement location?

This would be more of a technical determination.

Will the simulations and recommendations adhere to the player skill level?

Just thinking about this amongst ourselves, it could cater by skill level and/or a checklist. Checklist could be a list of skills (ie: backspin) that would allow the user to use more advanced option of the app. It was apparent from the answers to the structured interview that some users would benefit from the app teaching/showing techniques of a high skill level as the interviewees stated they often used such techniques.

Will the application support different pool game types (eight-ball, nine-ball, three-ball, cutthroat, cribbage, etc.)?

The person interviewed for the semi-structured interview did play different games, albeit pretty standard (8-ball, 9-ball). The 2 men interviewed for the structured interview knew how to play different cue games, but stated that they almost always play 8 ball. However with the narrow interview pool, the group feels that including different game types would be a feature that would need to be supported.

Do we need to add in extra coaching and technical suggestions, beyond the suggested moves, to make it more of a teaching app?

In the semi-structured interview, the person interviewed prompted the question after coaching was brought up. This means that there is interest in a coaching portion. The men interviewed for the 2 structured interviews stated that while being able to see the move would indeed help them accomplish the move, they would like instructions as well. The group feels that the app should definitely contain coaching and technical suggestions, if not on the main screen, perhaps in a separate tab of the app.

Other insights relevant to our design

- From the observations, we realized that the app will be used in an environment that is often loud and busy (music playing and people talking/laughing all around). Any verbal coaching or instructions should be accompanied with non-verbal on screen instructions.
- Many people only play the one or two types of pool games that they first learned and have stuck with, because it's the game they know how to play best. Though there is some variation, certain games seem most popular (8 and 9 ball). From these initial observations, it was not entirely clear if it would increase user interaction to help teach them new types of games or if most want to stick with their game of choice.
- The users generally seem ambivalent about adding any tracking beyond basic statistics, generally regarding pool as a game and something they do for fun with friends. This may be something that would be more interesting to some very serious players, but does not seem to be of much use to most general players.
- There was more interest than expected in going beyond simple instructions for the next best move and providing actual coaching to improve the player's skill. Most users saw the main advantage of the app in not being just a simulation of the next step, but taking into account the skill level of the user and giving specific advice on how best to make the shot.
- While the interviewed potential users seem to have average or above average pool playing skills (6 or 7 out of 10), they seem to have average or less technical skills (using their phones generally for facebook and other simple apps). It will be important to design the app with a fairly simple and intuitive interface. A specific example of this approach brought up during a review of our results was the checklist of current skills that is easy to understand and update.