

Researcher: Alright. So, before we go into some gameplay, I'm going to ask you some questions, just to set a bit of a baseline and know who you are. Is that alright?

Participant: Yeah, sure.

Researcher: Alright, so would you generally say that your attention span is high or low, when doing any type of actions?

Participant: I have ADHD, so I would say a little more towards the low end.

Researcher: Alright, no worries. And what do you do as an occupation? So, do you work, do you study?

Participant: I study.

Researcher: Alright. And do you need your PC a lot? To do that?

Participant: Yeah, I do game development, so it's a pretty heavy PC stuff.

Researcher: Alright. And would you say that usage of PC affects the way that you play games?

Participant: It affects the way that I play games. It's not really just a PC, it's more the use of the techniques in games that I see. So, when I'm playing a game, I will recognize certain things that I've learned, for example.

Researcher: Could you give an example?

Participant: For example, we see how games are textured or modeled and you can see games that are applying those techniques. So, you start noticing stuff around you, for example, things that are blending out of view that are clipping out and you realize where that's coming from. But it's not really anything like, I use my PC, so I notice this or something. So, it's more of a technical...

Researcher: Alright, so, by looking at how the game is built up, in a way.

Participant: Yeah.

Researcher: And how does that affect it, do you think? So, you're looking at these elements, but is it getting you out of certain state of flow or do you feel more immersed within the game while seeing that, or is it just breaking it, for example?

Participant: It kind of breaks the illusion sometimes, but it's kind of fun to notice because I'm also learning about it, so it's not really like it bothers me. But I guess you could say it kind of breaks the state of flow, like if you see something clipping out, you can notice that it's a game and that you're not really the person playing it, I guess.

Researcher: Alright, that makes sense. Now for the second part of the questions, how long have you been playing CS 2 for? Or Counter Strike as a whole?

Participant: Counter Strike, I got CS-GO on my birthday in 2017, so that's like six years ago, I think.

Researcher: Oh, wow, yeah, that's been a while.

Participant: Yeah, and I think I have like around four to five thousand hours.

Researcher: Alright, and can I ask how often do you play?

Participant: Before I went into my studies, it was around 60 hours per week, or no, 60 hours per two weeks, I think. But now it's more around like 20 hours per two weeks, so it's like 10 hours a week-ish.

Researcher: Yeah, it's just school and studies.

Participant: Yeah.

Researcher: And when you then play, how long do you play per session usually?

Participant: Per session, I usually do like a warm-up that's like around 20, 30 minutes, and then I have like one to three games, I would say. So it's like, if you count like half an hour per game, then it would be around two hours, or three hours per play session.

Researcher: Okay. Now, on the topic of the game itself, what do you particularly enjoy about Counter-Strike 2?

Participant: It's very competitive. There's not a lot of luck involved, so it's kind of like the best team takes the win. Okay. There's like deep strategies on the utility lineups and kind of patterns in the game and like knowledge I have to know, and like, you get better the more time has been into it. It's like a very steep learning curve, I'd say.

Researcher: Okay.

Participant: So like in most games, if you play like 500 hours, you're going to be like around the top ranks, but if you play in CS, for example, I have like around 5000 hours, and I'm pretty much stuck in the lowest league of ESEA, which is like the paid tournaments. Like we're barely qualifying for the playoffs there. So it's a very competitive game. So high ceiling of skill.

Researcher: So that's something you enjoy about as well then? The fact that it is so competitive.

Participant: Yeah.

Researcher: And is there something that you particularly dislike about the game?

Participant: Cheaters. That's pretty much it really. Just cheaters, sometimes language barriers, but mostly cheaters, that kind of ruins the game.

Researcher: So it's mainly about the interactions with others that can ruin it sometimes?

Participant: Yeah.

Researcher: Yeah. All right. That makes sense. As it is a team shooter, right. And to go a bit deeper into the head-up display, do you as an expert play in a way that might, because you've got 4000 to 5000 hours, do you often make use of the head-up display within this game and does it ever distract you?

Participant: The mini-map for sure, to look at enemy positions. For example, if your teammates see somebody, there will be a red dot on the map where they saw the person. So you kind of have to keep note of that. If you see something pop up, you have to look at where they are if they're not calling it. If you have a good team, if you're playing like coordinated, then they will say like, I saw this person there or I heard this person there.

But if you're just playing in normal pugs or normal casual games or competitive games, but they're casual compared to tournaments or teams like, then there won't be a lot of communication. So you'll have to look at your map to see where the enemies are. So I guess in a way, sometimes you will look at that and then you won't see what's going on, on your screen or you'll not be focused on where you're across areas.

Researcher: So the other element, besides the map, you don't really use often?

Participant: Oh, no. Yeah, pretty much the health or the ammo. The ammo is pretty much after a while you start hearing or start counting in your head how many bullets you have left. You can kind of hear by the sound if you have a lot of bullets in your clip or if it's about to run out. And health-wise it's kind of just like if you have a moment of relaxation where you're completely safe.

Researcher: All right. And do you feel like these elements distract you from the gameplay sometimes?

Participant: I wouldn't say so. No. Maybe the map, but not the bottom GUI stuff or the timer or something.

Researcher: All right. Yeah, no worries. And besides CS2, do you play any of the first person shooters?

Participant: It's been a little while, but I used to play Overwatch, Paladins. Played a very, very tiny bit of siege, but I didn't really enjoy it that much. Valorant, I've played a few tournaments that I won, but I don't really play the game. I've clicked people's heads and we ended up winning.

Researcher: I mean, it's a very close game to CS2, in a way.

Participant: Yeah, it's pretty close. I don't know the abilities of the characters, but when you click people's heads, they die. So that's kind of similar.

Researcher: Right. Is there anything you particularly like or dislike about these games? That make them different from CS2.

Participant: Valorant, I would say it has too much bullshit. It's like a lot of abilities, a lot of stuff that are incounterable. That's if you're on the certain character. Like for example, if there's a flash coming, you just send flashes that are undodgable. So you just have like no counterplay.

It's kind of annoying. The fact that your team composition is very dependent if you're going to win or not. So your teammates are even more important.

But yeah, that's just kind of it. For a first siege, I feel like it's a lot of slowing down. It's like a slower version of CSGO. It is waiting around for a minute or running around with drones to aimlessly scout the map. And then wait until somebody walks into your pixel crosshair and kills them. Which is not really my type of thing.

Researcher: And with Overwatch, because I think there was a last game that you also mentioned?

Participant: Yeah, it's fun. I just never really had a real squad to play it with, would I say. I think I got up to top 500 on Ball, but I never really had a squad to play with consistently. So I'd actually stop playing.

Researcher: Yeah, makes sense. Alright, now that we know a bit of what games you play and what you like about games and such. All these first person shooters. In what context do you usually play games? Is it at a PC? Is that on a couch?

Participant: Yeah, it's mostly at my desk on a PC.

Researcher: Alright, and when do you play them? Exactly.

Participant: Usually evenings through late night. Weekends, I am usually have my parents, because my PC is at my dorm.

Researcher: Okay, so it's through the week, in the evenings.

Participant: Exactly.

Researcher: Okay, and do you tend to play CS2 with others, or do you prefer to play alone, or with randoms?

Participant: I prefer to play with others, but there's not a whole lot of friends that I have that are able to queue with me. So sometimes I'll play on a smurf account, but usually I just solo queue or play with one other guy.

Researcher: Okay, and then when you do play? Would you say that you communicate with people through voice or text-chat?

Participant: Yeah, I communicate quite a lot.

Researcher: And when you do so, do you feel like you can fully concentrate on the game?

Participant: If you're calling, you're going to be a little bit less focused on shooting, but it's kind of worth the trade-off, I feel like, because your teammates are going to play better then.

Researcher: Alright, makes sense. Okay, so got a little bit of a background of you as a player. I will now just ask some questions to set a bit of a baseline regarding the things that I want to investigate with this research. So before you're playing, just in this current state, how would you rate your mental effort? How much attention do you feel like you're currently given to this?

Participant: Like the interview?

Researcher: So basically to the actions that you're now taking, right? So if you take all of it together, how much attention do you feel like you're distributing?

Participant: I guess like a three out of ten.

Researcher: Okay, and is there any particular reason why?

Participant: Just not really needing to have a lot of brain effort or pattern recognition or anything like that. I'm just kind of answering questions I guess.

Researcher: Alright, makes sense. And secondly, when playing Counter-Strike 2 because you mentioned this about playing with teammates, however, you also have a game or deathmatch. Do you ever feel helpless when playing the game?

Participant: Helpless when playing deathmatch or helpless when playing in the game?

Researcher: Yeah, when playing deathmatch.

Participant: Not really. I usually play deathmatch without sound. It's kind of an old CS habit. People play without sound so they don't get frustrated or annoyed. You're going to get killed from the back quite often.

But yeah, just play without sound. Just shoot people in the head. Usually you're going to out aim people or you're going to out shoot people, I guess. Just because of the amount of hours that you have or the amount of aim that you have considered to the normal average player.

Researcher: So, for you it is more of a casual way of playing the game then?

Participant: Yeah, it's kind of like a warm up.

Researcher: Yeah, okay. And because you're playing it casually and you feel like you have control over it, then would you say that? Sorry. What happens to you within the game modes? Is it dependent on yourself or do you feel like it's more dependent on your environment, for example?

Participant: I would say 80-20. It's like 80% of yourself, whatever position you put yourself in. If you're playing very linearly, I guess, a perfect concept that some intermediate players will know. For example, if you're peeking out on an angle where let's say 10 people and 10 normal common angles can see you, then you're usually going to lose the fight because there's a lot of angles that people could be at and you can't really clear one by one. If you're fighting angle by angle, then it's kind of dependent on your aim unless you're getting killed from behind. So as long as you're playing properly, even if you're playing casually, like you're just playing to practice, then you're usually going to be completely fine. Unless you're getting killed from behind because people spawn behind you and sneak up on you or something.

Researcher: So it's dependent on your own skill then?

Participant: Yeah, I would say so.

Researcher: Okay. Now lastly for baseline, I do also want to basically test your time duration perception. So basically what I'll do is in a bit, I'll play tone with the sound board.

I'll play it now so you know what to expect. [Plays tone] Right?

Participant: Yeah.

Researcher: So I'll play that in a bit and then whenever you feel or whenever I play the tone again, sorry, you tell me how much time has passed, you know, according to you, right? Yeah. So of course for this, I will ask you to make sure that everything else is on do not disturb, that you're not looking at a clock this or that, right?

Participant: Yeah.

Researcher: So if you want to play around with something that you have to completely fine, it's just to set the baseline right now. All right?

Participant: Okay.

Researcher: All right. Let me just get ready. Three, two, one. [Plays tone] [Plays tone again]

Participant: I would say like 40 seconds.

Researcher: 40 seconds. All right. Let me just note that down. I know this is a bit of the most awkward part of the, you know, research, but basically later on, we'll be doing this again. But while you're playing, right? So, so you have a bit of context there because I know it feels awkward for me as well. So don't worry.

All right. So that we have the baseline set up. We will be, you know, testing, so if you could open up a counter strike two.

Participant: Yep. It is open.

Researcher: All right. Perfect.

For your information, we will be changing some things with the developer commands within counter strike two. I don't know if you're familiar with those.

Participant: Yeah.



Researcher: So it's basically just to avoid communication here or, you know, between people in the game. Could you stream the game for me here?

Participant: Sure thing. I think that this works.

Researcher: Yes, that seems to work. All right. So let me just open up the procedure here. So if you could first go to the settings menu. And make sure that the game is on a full screen mode. All right. And you should also have, I think, audio to turn off voice chat. Or it could be in game. Let me have a look.

Participant: Mute all but friends I could turn on like.

Researcher: That's maybe mute enemy team as well. All right. Now, if you just go to the play section, things, you can select death match up top. And the matchmaking. If you could close the party in the left side of the screen.

And you can select dust two as a map. And yeah, let's go and I'll send you a command here that you can put into the developer console. Here we go.

Participant: I think that's just the setting that I already changed.

Researcher: Oh, that could be. So this is going to be a warm-up, because I want to control whether you joined in a already going match. So yeah, I'll just mute myself here. You warm up. All right.

[Deathmatch warm-up game]

Participant: Okay, that was death match.

Researcher: Alright, perfect, that was the warm-up. So, I'd say, in this lobby, everything seemed to go alright, in terms of skill level and such. So, I will let you play further, just remember that I will play the tone again, while you are playing. And once the tone has played, just tell me how many seconds have gone by.

Participant: Alright. So you're going to play like another one first, and then a second one? Or just since the last one?

Researcher: So, I will do one, and then another one. And then the time that has passed in between.

Participant: Okay.

Researcher: Should be alright. Alright, I'll mute myself again and yeah.

Participant: Alright.

[Deathmatch game]

Researcher: [Plays tone] [Plays tone again]

Participant: Okay, I think that's like 1 minute 30. Okay, that was the second game.

Researcher: All right, perfect. If you can just dequeue yourself here, I'll just ask some questions now about your gameplay session and your experience through that. All right?

Participant: Sure.

Researcher: All right, so as you might remember, I did earlier before you played, ask how you would rate your mental effort, right?

How would you rate it during the gameplay session, so while you were playing?

Participant: I'd say like eight.

Researcher: Okay, so that's quite a substantial change. What do you believe to be the reason behind such a substantial change?

Participant: Well, I don't play it like kind of like on the autopilot I played through warm up or improve or practice. So I'm kind of paying attention to certain stuff. Well, I mean, on one side I am just running around like a monkey and not really thinking about stuff. But on the other hand, I'm still like

keeping my crosshair on the right placement, like moving properly, not peeking in dumb ways and stuff.

Researcher: All right. And of course, in a gameplay session, there's a lot of elements to it, right? What elements do you believe have had the greatest impact on this change in mental effort?

Participant: The biggest, okay. I guess shooting the other players. Yeah, focusing on my own gameplay to be able to shoot the other players or out aim them or. Yeah.

Researcher: Okay. And would you say there's something that just had about no impact on it?

Participant: About no impact?

Researcher: Or the least impact in a way.

Participant: And what was that I'm choosing from? Like...

Researcher: Anything related to the game, really. So, including the head-up display, the people, the map, things like that.

Participant: I feel like in deathmatch, I definitely don't pay attention to the HUD. Very, very, very rarely will I check like how many kills I have or something. Because I look at the kill counter. On the bottom left, I think it is. I would other than that, not really using that much that much.

Researcher: So you weren't really looking at it?

Participant: Yeah.

Researcher: Okay. And when you were playing, do you, were you feeling the sense of control?

Participant: Yeah.

Researcher: Okay. And when were these moments, would you say?

Participant: When I had a sense of control?

Researcher: Yeah.

Participant: I guess when I hit my shots or when I hit cool shots.

Researcher: Yeah. So, with that, so if I were to say that the events that were happening to you in the game were mainly dependent on yourself. Would that be correct?

Participant: Yeah. Myself and the enemies.

Researcher: To what extent? On the enemies.

Participant: Well, it takes some mental capacity to not get frustrated when you get shot from behind for three times in a row or something like that.

Researcher: Yeah. And now that I mentioned that, while you were playing, did you ever feel helpless, regarding the gameplay?

Participant: I mean, when you play, well, like when you just die and you respawn right in front of somebody or like, I mean, it's right around the corner when you're still jumping with your knife out. Like, nothing that you can really do about that. That's kind of just the game. You kind of have to get over that. I feel like.

Researcher: Yeah. Generally, you have the sense of control while playing. Except for those moments?

Participant: Yep.

Researcher: Okay. Good to hear. And now we're relating to the quack sound that I was playing earlier. Did you feel at any point during gameplay that you were losing a certain track of time?

Participant: I guess, yeah, I don't really pay attention to the time at all. Especially when I'm playing deathmatch. Sessions are usually like 10 minutes long. So it's not really important for me to keep it in mind, I feel like.

Researcher: Okay. But it's more about how you experience time, if that makes sense. So how time transforms for you, right? Would you say that was happening during that gameplay session that you were simply not really estimating or experiencing time like you normally do?

Participant: I guess so. I guess your priorities are on other things, you focus on other things. So you're not really paying attention to it and then it goes by faster or slower than you think.

Researcher: Okay. And were there moments that this experience was stronger or weaker?

Participant: I guess during the quack sound interval, I guess it was a little... I was more conscious about it.

Researcher: Okay.

Participant: At other times it was kind of just mindless focusing on the game.

Researcher: Okay. And lastly to wrap things up, did you ever find yourselves looking at the head-up display while playing?

Participant: Sometimes looking at the kill counter. That's about it.

Researcher: And for what reason was that? Is that because of competitiveness?

Participant: Yeah. Just wondering how many kills I've gotten in a row. I guess competitiveness. Yeah.

Researcher: All right. Completely made sense. It's a competitive game, right? Yep. Okay. Yeah. That was basically about it. I do really want to thank you for lending me your time here. I really appreciate it. If you ever change your mind on this data that we gathered here to be used in this research, you can always send me a text over Discord or my email address. I think you should have that, but if you want, I can send it to you again. And if you want, I can help you with making or reversing any of the changes that we made earlier.

Participant: That's alright.