# Team 5 capstone presentation

## Slide notes

### Slide 1

None

### Slide 2

Modern video game design philosophy is favoring experienced gamers, making it much harder for non-gamers to get into video games on PC. Don't worry, we'll try to back this bold statement up in a second.

But the purpose of our research is to see how to best use tutorials to make non-mobile games accessible for non-gamers.

### Slide 3

Here we can see the google searches for terms like "walkthrough", "help" and "how to play" for the games baldur's gate 3 and the witcher 3, two very popular PC games. Overlaid in grey are the daily player numbers taken from SteamDB. so we see a strong correlation; a consistent amount of players need help with these games.
We didn't wanna just show you a million graphs but we did this exact same thing for call of duty modern warfare and fifa.

We don't see the same trend in mobile games. This is that same data for candy crush, and we also did this for gardenscapes and clash of clans.

We looked at statistics from Adjoe and Statista.
We see that the demographic that spends the most time and money within mobile games are 40 years old and over. The same demographic make up 52% of mobile gamers and only 42% of PC gamers. From this we can hypothesize that people with less gaming experience may be drawn to mobile games because they have a lower threshold of entry.
There are many other factors, like mobile games being less of a time commitment, but we wanted to explore another roadblock that keeps older gamers, mobile gamers and non-gamers from getting into video games. That is the role of the tutorial. Can we lower the threshold of entry through tutorials?

### Slide 4

This is a sample of works already done within this topic. For the sake of time I won't go through each of them. The first two discuss usability principles in general product design, and talks about what makes a product good to use for users. The next two discuss specifically what makes video games easier to understand and use, and the last two are studies done on tutorials. General findings are:

1. Narrative driven tutorials are best

2. Quantitative research works the best when discussing video games
3. We could not find any works specifically approaching non-gamers

## Slide 5

In general, some works discuss approachability in design, works that discuss tutorials, and works that discuss playtesting, but few works that combine them. Works that discuss tutorials and what makes a good game tutorial lack the lens of appealing to non-gamers.

## Slide 6

Approachability is best defined in the context of this paper as how intimidating a new player finds the game's mechanics.
Usability determines whether the user can achieve the product's goals with the least energy exerted.
Accessibility is primarily used in the context of accommodating for disabilities. This is rapidly becoming a matter of law, where it was not always. We use the term in its most general form: how can anyone, including those who are not disabled, access this game? What roadblocks does the game put up for its players?

## Slide 7

Project: Throughout this capstone thesis we will explore the elements of a good tutorial, different approaches to tutorializing new players, and finally a custom project to test our theories and collect data.

Purpose: Video games are designed with gamers as the primary audience and an expectation of players having previous gaming experience, because of this video games have become less and less accessible to non-experienced gamers. The purpose of our research is to understand what video games are like for a non-gamer and examine video game approachability.

Key findings: Our research showed large similarities between user accessibility in general product design and player accessibility in game design. We also found that tutorials can be largely divided into three categories, based on how information is conveyed. We found that the most effective method for tutorialization is one that leaves information accessible to be re-checked at any time.

## Slide 8

Watsonian and Doylist are terms that are usually used in literature. It basically means "in-universe explanation" and "out-of-universe explanation."
For example, this is DC's Powergirl. [Click screen]

The *Watsonian,* the in-universe explanation for why she is dressed like this, is that she gets her powers from the sun. So her skin needs to be exposed to the sun.
The *Doylist,* the out-of-universe explanation for why she's dressed like this, is that sex sells. Simple as that.

So if we use these terms for video game tutorials, a Watsonian tutorial would be a tutorial that happens within the game's world. Like the protagonist being a soldier that goes through a combat exercise to teach the player how combat works.
A Doylist tutorial is tutorial that takes place entirely outside of the game's context, such as instructions being delivered via text boxes in the corner of the screen.
And the last category of tutorial has nothing to do with Powergirl. It's the Non-explicit tutorial, a tutorial that gives absolutely no hints. For instance, the *Mario Bros* (1983) arcade game, where the player is not told what a question mark block is, but the first one is placed in an area where the player has to jump and is therefore more likely to hit it on accident, revealing its purpose.

## Slide 9

So we made a tutorial for each category.

One had the player guided by Devy, an in-game mascot who needs the players help to open a door. They did this by picking up a battery and putting it in a battery compartment on the wall.

The other just leaves the battery out on the floor, but has post-it notes spread around the room that lets the player know how to move and pick up things.

The third one has a green box and a green button. The goal is to push the box onto the button to hold it down, so it can open a door. The player is given no instructions.

## Slide 10

We used a snowball sampling method, which meant we asked family and friends that fit our criteria if they wanted to play, and then asked them if they knew someone else who wanted to play. Our criteria was simply anyone who self-identified as a non-gamer.

We ended up with 11 candidates, 9 of which produced viable results. (The others experienced bugs during playtesting that made the game incompletable.) We split them up equally between the three tutorials we made, and then we recorded them and their screen as they played.

After playtesting we conducted an interview with them. We asked questions like "Do you feel like you knew how to do things in the game?" and "How much pressure did you feel playing the game?".

Later we watched back the recordings and took more detailed notes on everybody's session.

## Slide 11

None

## Slide 12

Our participants were all between the ages of 49 and 65. This was not on purpose, we just needed non-gamers and all the non-gamers we found were in that age range.

Because we had to sit down and play with the participants, and then interview them, we couldn't do too many. We might have gotten more participants if we had done something like an online survey.

Because we were recruiting from friends and family, the participants we got weren't exactly enthusiastic about gaming. It's possible that if we advertised for playtesters on facebook or something, then we would have gotten more talkative, engaged playtesters that could have given us more data.

## Slide 13

There are other factors that can impact how easy it is for someone to play a tutorial. We made this graph to show that factors like age and gaming experience didn't have much of an impact on how long it took someone to finish the tutorial, but what type of tutorial they got *did* impact it.

Every non-gamer that participated described how much experience they had with games, and were assigned a number 1 - 3 based on that. 1 is "I've never played a game in my life" and 3 is "I can play mobile games" (which was the highest we got.) That's the orange line. The blue line is their age. As you see, time to complete doesn't go up when age does. It doesn't go down when gaming experience goes up.

## Slide 14

We also considered that how familiar our participants were with using a keyboard and mouse/touchpad would impact how long it took them to finish the tutorial. Here we again see that there's no significant correlation. Being familiar with a laptop doesn't mean the tutorial took less time to complete.

From this we can include that which tutorial you're given is the biggest factor for how easy it is to understand the game.

## Slide 15

After doing the playtesting and interviews, we took a lot of notes on each session and started identifying some patterns. On the big scale, we saw three things come up over and over again; players finding it difficult to play when they were given *too many* instructions, players commenting on the level design a lot, and players having some difficulties using the movement controls.

## Slide 16

Under these three, big themes, there’s a lot of smaller keywords we used to sort everything out. Here is how often each of these things were commented on during playtesting.

## Slide 17

None

## Slide 18

None

## Slide 19

None