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Cross-Platform User Interface

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ABSTRACT

These days, more and more video games are released for multiple platforms. Some of these platforms have vastly different ways to allow for player interaction, from standard controllers for a console game, to the keyboard and mouse combination of a computer and even the touch screen of a mobile device.

Each of these control layouts affects the user experience, and depending on the type of game serious changes in the user interface need to be made to keep the game playable.

In this research, various professionals with experience in designing cross-platform UI – especially in the context of video games – were interviewed about their experiences with developing such UI.

An interview guide was constructed based on the study of written sources and talks related to cross-platform UI, and was used in the interviewing of the aforementioned professionals. Their answers were analyzed and compared to define key elements that need to be kept in mind when designing cross-platform UI.

TERMINOLOGY

- User Interface (UI): The point of human-computer interaction and communication in a device. This can include display screens, keyboards, a mouse and the appearance of a desktop.
- Heads-Up Display (HUD): Any transparent display that presents data without requiring users to look away from their usual viewpoints. In video games a common example is a health bar for the player character.
- Cross-Platform: Designed to work on several platforms.
- Game mechanics: The rules that govern and guide the player's actions, as well as the game's response to these actions.
- UI Design: The process designers use to build interfaces in software or computerized devices, focusing on looks or style. Designers aim to create interfaces that users find easy to use and pleasurable.
- Player immersion: How invested and caught up a player gets at the moment of playing a particular game.
- Keyboard software: a.k.a. on-screen keyboard, a system that replaces the hardware keyboard with an on-screen keyboard.
- Console platform: A console used to play video games, such as the Xbox 360 or PlayStation 4.
- Mobile platform: A mobile device such as a smartphone or tablet.
- Qualitative research: A research method that focuses on obtaining data through open-ended and conversational communication.
- In-depth interview: A qualitative research technique used to conduct intensive individual interviews where the number of respondents is smaller and research is focused on a specific point of interest.
- Paradigmatic orientation: the underlying assumptions and structure around which a person bases their analysis and understanding of the world.
- Focus group: A group interview involving a small number of demographically similar participants who have other qualities or experiences in common.
- Port: When a piece of software has been converted to run on different hardware than it was initially designed for.
- Control layout: The setup for how the player interacts with the game world. Some examples are an Xbox 360 controller, keyboard and mouse or touchscreen.
- Responsive design: Design that responds to the environment in which it is viewed. For example, a website which changes layout when viewed on a computer screen instead of on a mobile screen.
- Playtester: A person who tests a new game for bugs and design flaws before it is released on the market.
- Qualitative data: data not measured using a fixed scale, statistics or mathematics. Simply put, it's data that can't be represented by numbers alone.
- Qualitative Data Analysis (QDA): The analysis of qualitative data.

INTRODUCTION

The User Interface (UI) is a crucial part of any game: It is how the player receives information from and interacts with the game beyond what's readily apparent in the game environment the player character moves around in. It also gives the player their first impression upon starting up the game through the start menu and is an ongoing experience through the Heads-Up Display (HUD) and in-game menu's. It is essentially the glue to a game.

The UI of any game is – ideally – unique to that game, specially crafted to fit the tone and gameplay to give the user the best experience without being consciously aware of its presence: the best UIs often go unnoticed because they're integrated so well into the gaming experience.

As such, when porting a game from one platform to the next the UI needs to adapt; both to the difference in screen size and resolution as to the different control system changing the player interaction with the game.

When first designing and implementing the UI of a video game, it is not yet necessary to think about how it would translate to another platform than the one it's designed for. Therefore, if the game is popular enough to warrant a cross-platform release, redesigning the UI for the new platform presents the developers with a new challenge long after the game has been finished and released.

Due to aforementioned uniqueness of the UI of a game, redesigning it for a different platform is always a unique process. To decrease the difficulty of this process, this research aims to interview various industry professionals well-versed in the subject on how they deal with this challenge.

RELATED WORK

A 'GOOD' UI

There are various sources that describe what a good UI entails ([L.2016](#), [C.2013](#)). It needs to help players intuitively understand the mechanics and layout of the game, stylistically fit into the game world to help player immersion, and avoid disrupting the gaming experience by – almost paradoxically – being so natural to navigate that players barely notice it's even there.

Because the UI needs to further the player's understanding of the (unique) game mechanics and fit into the game world, its design and priorities can vary drastically based on the content of the game itself. This already has an impact at the beginning of the design process, and remains true all the way up to the final production stages of the game. This can range from a strong focus on minimalism ([M.2017](#)) to a heavy integration with the game world itself to heighten player immersion ([B.2013](#)).

When porting a game to a different platform, while the stylistic elements and the feeling invoked by the UI remain the same, developers need to redesign the UI layout to suit the target platform ([E.2014](#), [A.2004](#)).

Switching from one type of screen to another can heavily influence the screen resolution depending on whether it's meant to be seen from close up or from a distance, how much information can be displayed on the screen without cluttering the display, the font size, etc.

The change of platform also means a change in controller layout. When porting, developers need to take into account whether an item can be directly interacted with on the screen itself, or if the player interacts with it through a button on a controller or keyboard. The controller layout also influences whether the game needs keyboard software for text input and the size of buttons to take into account visibility and selection difficulty when using a touchscreen.

A GAME RESEARCH INTERVIEW

Many research questions can best be answered through interaction with the player base, such as through surveys, experiments, participant observation or interviews ([G.2015](#)).

These methods of gathering information apply not only to the player base, but also to the developers behind a video game. As the research question for this paper focuses on the production side of video games, the latter group is the one that will be interacted with. The method for this interaction will be in-depth interviews.

There are several types of interviews, and ways of conducting an interview ([G.2015](#)). It is up to the researcher to select what type and method best fits the purposes of their research.

RESEARCH QUESTION

What are key elements to keep track of when converting UI between different platforms?

CASE STUDY

1. INTRODUCTION

This case study will discuss the preparations, execution and analysis of interviews with various industry professionals. The methodology used for this research was mainly built upon analysis of the book “Game Research Methods: An Overview” ([G.2015](#)), which specifically focuses on explaining how to perform research around the subject of video games.

The information and interview techniques laid out in this book were confirmed and refined through additional analysis of various other resources on the subject of professional, research-focused interviews.

2. CHOOSING THE INTERVIEW TYPE

Outlined in “Game Research Methods: An Overview” ([G.2015](#)) are four main criteria for deciding which method of gathering information from participants to employ.

This is used to decide between a survey, an in-depth interview, etc.

These four categories are: paradigmatic orientations, depth of information, level of control and ethics.

PARADIGMATIC ORIENTATION

Paradigmatic orientation – or the underlying assumptions and structure around which a person bases their analysis and understanding of the world – depends entirely on the researcher gathering the information ([G.2015](#)).

The orientation of social constructivism believes that an individual’s understanding of the world is developed through social and cultural processes, rather than being natural or inherent. It views the world as having no single truth, but rather multiple truths that are dependent on a person’s cultural context and experiences ([G.2015](#)).

Post-positivist work, on the other hand, recognizes that people are changeable and varied but still looks for empirical, measurable characteristics or patterns that can be explained scientifically (Baran and Davis, 2011).

This research will be conducted following the orientation of a social constructivist.

From this viewpoint, an in-depth interview is preferable because it allows for co-construction of the interview by

both participant and interviewer. Participants help direct the flow of the conversation, building the interview's narrative together with the researcher (Lincoln and Guba, 2000).

DEPTH OF INFORMATION

Depending on whether the research requires in-depth information about a subject or benefits more from a large quantity of different people's opinions, the researcher can choose between different methods of information gathering such as an interview, focus group or survey.

An advantage of one-on-one interviews is that the researcher can gain in-depth information about the topic of interest (Morgan, 1997).

Focus groups are instead often preferred when seeking "concentrated amounts of data" (Morgan, 1997, p.13). Through the member interactions that occur in a focus group, the researcher is able to gather large amounts of data in one sitting.

The goal of this research is to gain in-depth information about the adaptation of cross-platform UI. Since this research focuses on the opinion on UI from a limited number of industry professionals – specifically UI designers and programmers – there's no need for the concentrated amounts of data that can be gained from a focus group. Instead an in-depth interview is preferable due to the in-depth information that can be gleaned on the topic.

LEVEL OF CONTROL

In individual interviews, the researcher has a large amount of control, as they are interviewing only one person with whom they have gained rapport over a period of time (Lindlof and Taylor, 2002).

The one-on-one nature of the interview setting allows for more control over the direction of the conversation if guidance is needed (Morgan, 1997).

In the context of level of control, an in-depth interview is preferable for this research due to the high level of control given to the researcher.

However, the amount of rapport developed with the person being interviewed does not particularly benefit this research, as a single interview per person would not allow for much development. Such rapport is likely not necessary to reach the necessary depth in a topic that is more professional than personal to the participant, such as UI design.

ETHICS

Because an interview takes place only between the participant and interviewer, the researcher has a lot of control over the amount of information regarding the participant's identity that is revealed with the publication of the research itself. The researcher needs to take great care with this information, as the one-on-one nature of an interview can allow for the participant to more easily bring up sensitive information related to themselves.

In the context of ethics, it is not a large concern for this research specifically considering the impersonal nature of the research topic as opposed to more personal ones.

Of course, it remains the duty of the researcher to confirm whether the participant wishes for their name and identity to be hidden to ensure anonymity.

Informed consent is still applicable to this research, so the participant will be fully informed of the nature of the research and for what purposes the results of the interview will be used, as well as the option of protecting their identity.

This includes their ability to leave the study at any time, including having their contribution removed if asked.

CHOSEN INTERVIEW TYPE

The in-depth interview satisfies the requirements of this research on all levels, and as such will be the method employed going forward with the research.

Because an in-depth interview suits the requirements for this research so well, mixing methodologies such as coupling survey, experimental and interviewing methods simultaneously (Morgan, 1997) is not considered beneficial, and thus avoided.

3. PARTICIPANT SELECTION AND RECRUITMENT

After deciding upon the type of interview, next up is the selection of suitable participants, and following that recruiting them for this research.

SELECTION

The selection of participants involves a number of steps, as talking to every individual involved in a particular area is largely impossible. "An intelligent sampling strategy enables researchers to make systematic contact with communicative phenomena with a minimum of effort" (Lindlof and Taylor, 2002, p.120). It is necessary to carefully consider various criteria to decide upon which participants should be approached for an interview.

The ideal participant for this research would be a person with a UI-related occupation in the game industry, and who has worked on porting a game to other platforms.

It is of course necessary for the researcher to be able to comfortably communicate with the participant. This would require for both parties to be able to speak and understand either English or Dutch. As such, participants from companies who produced a game that was not initially released in either language may not be suitable depending on their personal skill in employing either language.

Due to the focus on a purely technical subject, the personal characteristics of the participant such as gender or age are not a necessary filter for participants.

Nationality may produce interesting contrasts - an example of a large difference would be reading from the left or right - but participants are selected in the belief that these differences would not heavily impact the core question of this research.

RECRUITMENT

Due to COVID-19, large in-person events that would ordinarily be prime locations to find and recruit participants are unavailable.

Online versions of these events are an alternative, but may make finding and approaching a suitable participant more difficult and less personable, especially if done over text chat.

Instead, participants will be selected based on the literature study performed in preparation of this research: Speakers at talks, authors of papers, etc. focusing on the research topic have already shown a willingness to impart information on the subject.

An alternative if this does not result in enough willing participants is searching for people with the right professional experience via professional sites such as LinkedIn or by going through the credits/list of staff members of a game (company).

Additionally, the researcher can find more participants through their personal network, asking acquaintances whether they know and will reach out to any colleagues who fit the participant requirements.

After selecting the participant, the method of approach to attempt recruitment would be done via a formal e-mail or text message. This e-mail would contain a short self-introduction before briefly explaining the range and purposes of this research and asking for the participant's cooperation.

It will suggest performing the interviews in Microsoft Teams, but assure them alternatives are perfectly acceptable if the participant prefers it.

Upon finding a willing participant, the snowball approach should be considered: asking this participant to reach out to contacts of theirs who also possess the required characteristics for this research. Considering all participants will be active in the game industry, there's an increased chance that they know viable candidates.

4. WRITING THE INTERVIEW GUIDE

STRUCTURE

There are three primary structures for an interview: Structured, semi-structured and unstructured.

A structured interview contains set questions to be asked in a predetermined order, and this structure remains the same throughout all of the interviews ([T.2021](#)).

In contrast an unstructured interview has no preset questions, instead focusing on spontaneity. The interviewer asks the next question based on the participant's reply. It includes more open-ended questions and takes a rather informal approach, resembling a regular conversation ([T.2021](#)).

Settled between these two is the semi-structured interview. It has set questions like the structured interview, but allows for deviation and expansion, adding new questions not planned in advance ([R.2020](#)). The order of the questions can also be changed to allow the interview to flow better if a topic is brought up earlier than expected.

Each of these structures are valid options, and choosing one depends on the desired result of the interview.

The goal of these interviews is to gather in-depth information about the process of porting a UI interface cross-platform from various industry professionals with experience in this area.

Thus the interview guide will be semi-structured: there are specific questions to be asked and a need to stick to the same topic of cross-platform UI. These questions will also be the same across all interviews.

However, it will be semi-structured to allow for the participant and researcher to deviate into related topics of interest, since an industry professional is likely to think of useful information the researcher will be unaware of.

INTERVIEW GUIDE

Regardless of which structure is chosen to conduct an interview, it is necessary to prepare not only the questions to be asked, but also allow for flexibility.

This flexibility is required to best interact with the unexpected answers or new topics provided by the participant.

A good interviewer needs to be primed for these; otherwise, the opportunity to dig deeper into unexpected cases can be lost ([G.2015](#)).

As such, preparing a quality interview guide that allows for this is of the utmost importance.

Below is the initial interview guide used for the interviews included in this research. It has been broken up into four sections:

1. Introduction: Opens the interview and conveys necessary information to the participant.
2. Warm-up: Puts the participant at ease and builds rapport.
3. Substantive: Collects deeper data that answers the research question(s).
4. Conclusion: Thanks the participant for their cooperation and gives information on the future of the paper that they may be interested in.

The researcher goes through each section in the listed order. As this is a semi-structured interview guide, the order of the individual questions in each category can be freely decided upon at the time of the interview to allow for more flexibility and ensuring a good flow during the conversation.

INTRODUCTION

- Reintroduce myself: I'm Leah Meyer, a third year student at the Howest University of Applied Sciences in Kortrijk.
- Introduce the purpose of this interview: gathering data for my bachelor paper on cross-platform UI, specifically what key elements to keep in mind when converting the UI of a game from one platform to another so as to create a guideline of sorts.
- Inform the participant that they can request to have the information from this interview removed from the final paper at any time if they change their mind about participating.
- Would the participant be okay with their name potentially being included, or would they prefer to remain anonymous?
- Is the participant alright with this interview being recorded for future reference while writing the paper? If they're not, only written notes will be taken.
- Go over the interview procedure: I'll be asking various questions related to UI in the game industry and what complications cross-platform UI brings. The participant is free to decide whether they want to answer the question or not, and is encouraged to share additional information on the subject when they think appropriate.

WARM-UP

- For how long has the participant had an interest in video games?
 - When did they know they wanted to work in the video game industry?
- On average, how often does the participant play video games?
 - Do they play solely for amusement, or also in part to gain inspiration?
- What kind of video games does the participant like to play?
 - Any specific genre that's their favorite?
- What genre of games does the participant like to work on?
 - Does it match their preferences? Why (not)?

SUBSTANTIVE

- How long has the participant worked in the game industry?
- What is the participant's current occupation?
- How many companies has the participant worked for so far?

- Have they ever worked as a freelancer?
- Has the participant been working in a role focusing on UI for the entirety of their career? If not, can they give examples of what other roles they've had?
- Between what platforms has the participant ported games?
 - It's important that the direction – such as from console to mobile – is specified.
- How did this affect the layout of the UI?
 - Was a significant change necessary to account for the different control layout?
 - What reasoning was used to decide on these changes?
 - Was responsive design used?
- Did this affect the size of elements on-screen – such as buttons or text?
- What most surprised the participant when initially making the UI cross-platform?
- What did they think that the biggest challenge was in this process?
- What are some basic rules the participant thinks everyone working on cross-platform UI should keep in mind?
- Does the participant follow some guidelines personally?
 - Are these guidelines heavily influenced by their way of working, or are they more general?
- If the participant has worked on porting between multiple different platforms:
 - What differences are there between porting to these different platforms?
 - Does the original platform make a big change in this?
- Can the participant give a rough estimate of how long they think it took to brainstorm all of these changes?
- Who worked on these changes in the UI?
 - Only the participant, or others as well?
 - If the latter, what were their roles?
- Did the participant also work on the initial UI design before it went cross-platform?
 - If so, did they feel like they should've initially done something different when changing the UI for cross-platform?
- How did the participant go about testing the new UI?
 - If working with playtesters:
 - How was feedback on the UI gathered?
 - Did many playtesters have something to say about the UI, or did it go mostly unnoticed?
 - How extensive was the feedback on the UI on average?
 - If another method: ask more in-depth about it to figure out how this method works.
- How did the participant go about applying this feedback from testing?
- Before we close off, does the participant have anything they want to add on the subject?

CONCLUSION

- Thank the participant for their time and answers.
- Reiterate the subject of the bachelor paper.
- Ask if the participant wants me to contact them again when I've got the end results of the research, to share it with them.
- Thank the participant again, wish them a good day, and end the interview.

5. CONDUCTING THE INTERVIEW

SCHEDULING AND MEETING LOCATION

Upon confirming the participants' willingness to take part in the interview, each participant also indicated at what times they were available in the same message. At that point the researcher only needs to confirm what time works best for them.

During this process the clarification of the exact time zones is necessary as most of the participants are from other countries than the researcher.

All of the participants either suggested or agreed to the suggestion of using Google Meet for the interview. As the inviting party the researcher is the host for each of those meetings. However, due to relative inexperience with Google Meet, instead of scheduling the meeting through email a link to the Google Meet room prepared for their particular interview was sent to each participant, where they would meet up with the researcher at the agreed upon time.

Some participants could not take part in an actual interview due to time constraints on their side, so they instead opted to fill in the questions in a written format. The questions they were sent were a slightly modified format of the interview guide, which left the introductions and warm-up questions out along with most of the conclusion section of the guide.

INTERVIEW PROCESS

Every interview starts with the introduction section. However, depending on the participant this section can be partially skipped to immediately move onto the warm-up or even substantive questions.

Similarly, if the participant is forthcoming the warm-up questions can be skipped without consequence to move onto the substantive section of the interview.

Even if these areas are not skipped over, the semi-structured nature of this interview guide ensures that the researcher can adjust the order and wording of the substantive questions to better fit the flow and given answers so far, skipping over questions already answered or even rendered obsolete by answers from the participant.

The participant is also allowed to diverge from the questions entirely if they want to go deeper into a topic of interest to the study, allowing for new insights and subjects the researcher may not have thought of or included in the original interview guide.

If the participant runs out of material on this particular subject, the interviewer can spark the conversation again by asking one of the remaining questions in the guide – preferably as closely related to the previous topic as possible to ensure a good flow.

6. ANALYSING THE DATA

After gathering data through the interviews, it is time to analyze the data to answer the research question. As the results of an in-depth interview are qualitative data – data not represented by numbers – it's necessary to consider how to approach this analysis before one can get started.

There are many different types of qualitative data analysis (QDA) with their own strengths and weaknesses. The 6 most popular QDA methods are: Qualitative content analysis, narrative analysis, discourse analysis, thematic analysis, grounded theory and interpretive phenomenological analysis ([S.2020](#)).

While all of these methods of data analysis were investigated and considered, due to the straightforward nature of the questions and answers occurring in this research it was decided that none of the above methods were appropriate for the nature of this research.

Instead, the notes and recordings of each interview were compared to each other for matching or contrasting answers and conclusions.

As no single analysis method is perfect, using multiple QDA methods – this is called triangulation ([U.2022](#)) – was also a possibility. However, triangulation is quite time-consuming.

Given the limited time-frame for this research, it was thus left out of consideration.

RESULTS

THE INTERVIEW

After the first interview, a change was made to the order of the introduction questions: the point mentioning the subject of the interview and thesis was moved to be mentioned last in the introduction. This is due to two reasons:

1. It makes for a better jumping-off point to the actual questions, even the warm-up questions which are still related to video games.

2. A particularly enthusiastic speaker can skip the questions entirely and launch right into their experiences and opinions on the subject when it's brought up. While this is good for the interview itself, it can lead to some introduction questions being skipped due to not wanting to break the flow of the interview.

This was the only permanent change made to the interview guide after starting the interviewing process.

The usage of the interview guide also varied between interviews: whereas sometimes the questions were asked by the researcher, who moved to a new one once the previous question was answered, in other interviews the interview guide was used far less as the participant talked at length about the subject without requiring much input from the interviewer.

In the former case some of the questions were always changed or dropped depending on earlier answers, either due to already being answered or new information requiring the context of the question to be changed to gain more information.

In the latter case the interview guide was still useful to check what subjects still needed discussion, keep the interview on track, and get the conversation moving again when it slowed down.

INFORMATION

While each participant had different experiences with cross-platform UI, there was noticeable overlap between their opinions on certain subjects. Specifically on the usage of platform conventions and patterns, the necessity of changing the size of on-screen elements depending on the platform and the importance of playtesting.

CONCLUSION

INTERVIEW GUIDE

A semi-structured interview proved the right fit for this research: it provided a necessary structure to guide the interview and ensure all essential questions were asked, while leaving enough freedom to drop or adjust questions to fit the flow and needs of the interview.

Sometimes the interview guide acted more as a list of suggestions for when the conversation slowed, or a checklist

for what information still needed to be asked. Even when an interview mostly followed the guide prepared by the researcher, the questions were still moved around and sometimes dropped depending on the participant's answers and the flow of the conversation.

In conclusion, a semi-structured interview guide helped guide the conversation, but still required a lot of on-the-fly thinking from the researcher to best pick up on points brought up by the participant on changing questions to best fit the flow.

The one exception to this freedom to change the interview guide even when semi-structured is the order of elements in the introduction: the subject of the paper should go last, as it's the easiest jumping off point to start the actual interview, and is also a good point for the participant to take over the talking if they require little prompting through questioning.

The questions themselves suited the subject matter and didn't require permanent changes, especially as they could be dropped without consequence if it didn't fit with the flow of a particular interview. They have suitably helped identify the key elements necessary to answer the research question.

INFORMATION GAINED

After analyzing and comparing the answers of each participant on the questions they were asked, there were three main subjects that stood out as common opinions among them.

These three subjects answer the research question: "What are key elements to keep track of when converting UI between different platforms?"

In summary, these key elements are:

1. Platform and genre conventions, allowing for players to more easily find their way around the UI on any given platform.
2. Size of on-screen elements, which can vary greatly depending on the screen resolution, expected distance between player and screen, and the control layout.
3. The observation of playtesters, which is essential in figuring out if the changes made to the UI make sense to the players.

DESIGN GUIDELINES: CONVENTIONS AND PATTERNS

It is important to keep the playing experience the same across all platforms.

However, it's also important to keep to the conventions, patterns and best practices unique to each platform and game genre, to avoid confusing players or having to invest a significant amount of time and effort into teaching them a new pattern.

Such new patterns can be innovative and worth the investment, but it's difficult to know beforehand what changes will stick and what changes are simply an attempt to break convention.

As such, it's important to find a balance between innovation and convention. And most importantly of all, the gaming experience should be fun for the player.

A good method for making a game UI cross-platform is to start with the most 'restrictive' platform and work up from there.

For example, when working on a mobile/PC port, working on the UI on mobile and then upscaling the UI to fit for

PC. Upscaling – for example, moving from less to more space is easier to work with, and allows developers to more easily take into account limitations such as mobile platforms lacking the double-click or hover effects that come with a cursor.

Alternatively, instead of having everything work with the most limited control layout, one can start designing with more complicated controls, and make up for the missing buttons in cross-platform ports with virtual input - the missing control input in real life being replaced with buttons and options on-screen.

ELEMENT SIZE: DEPENDENT UPON THE PLATFORM

An important element to pay attention to is the size of the elements on-screen.

Developers need to take into account how difficult selecting a button will be with the given control layout.

The expected viewing distance between the player's eyes and the screen is also an important factor, which has a particularly large impact on the size of on-screen text.

For example, it is not unusual for issues to occur when porting a game from PC to a console game: if not changed, the text size can be too small to comfortably read on a distant TV screen.

TESTING: THE IMPORTANCE OF PLAYTESTING

For testing UI, having playtesters be observed by developers during play is key.

When having a person unfamiliar with the game test it, observe how they play the game.

While most players might not be able to give detailed direct feedback if they aren't focusing on the UI, watching them play the game can make it clear to the developers where they're struggling with the UI, what mistakes they make and how many times they fail to complete the desired action.

It's especially useful to observe the playtesters during a tutorial or when they're aiming to complete a specific task, as this means the observer has an easier time guessing the player's intentions.

Developers can then see where more people struggle with the UI, and adjust those sections when applying the player feedback.

FUTURE WORK

This research can be expanded upon by increasing the pool of participants to be interviewed, to see if the guidelines found in this research hold up with larger numbers. With more time to conduct the research, it would also be more plausible to find additional potential participants by asking the previously recruited ones to contact their personal network.

With more participants it is also possible to branch out further, focusing on what differences there are between specific platforms.

Towards these purposes it might also be worth contacting companies to search for potential participants, instead of solely approaching candidates directly via other channels.

PARTICIPANTS

For this research, various gaming industry professionals with experience in cross-platform UI – and even some UI specialists outside of the gaming industry – were contacted to take part in these interviews.

However, due to time constraints, deadlines or a failure to establish a proper channel of communication, only four out of the eight directly contacted participants agreed to an interview or to answering the questions in a written format.

Another word of thanks to those participants, namely:

- Jesse Freeman
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