

Study Plan

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Anna DeWitt

Carolyn Fiser

Matt Soave

Laurel Stone



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Introduction

What makes a breakout game? First, you have to get somebody to sit down. Then you have to make sure they are having so much fun they don't get off the couch again. Creating new fans and financial success takes much more than just a good idea and luck. The tutorial is a huge part of the introduction to the game and needs to be engaging and challenging, but not overwhelming—ideally allowing the user to have fun while learning game dynamics.

Purpose

Using co-discovery and other usability techniques, we hope to expand the user base of the action-adventure game genre by improving the experience for new gamers. We will attempt to discover blind spots in the current tutorial among other additions that will help lessen frustration and intimidation for beginners. Using a set of two screeners, teams of one novice and one experienced player (see definition of novice and experienced player later in this study plan) will be observed during test sessions. We anticipate that observation of the novice will help us identify challenges and concepts that new players may struggle with, causing them to abandon the game. Ideally, the experienced player will reveal the missing lessons that should accompany those early struggles and accelerate the development of the novice's technique and strategy. We intend to leverage our observations of behaviors and motivations of experienced gamers and novice players to interpret the data and deliver insights into the advantages of social learning and experiences for use in future tutorial design and development.

The placement of the game console in common living areas helps video games to be identified as a social activity (Klastrup 2003). This central location means that new players tend to develop an interest in playing socially – as a result of watching or being in the presence of a more experienced player. Our study will attempt to recruit participants that find themselves in a similar situation: regular access to action-adventure games and consoles through social connections, but rarely participate or prefer games outside of the action-adventure genre.

As demonstrated by Microsoft User Researcher Michael Medlock, something as simple as the

placement of an obvious next step can dramatically improve a tutorial. His example, adding a tree clearly within the user's field of vision, allowed them to easily conquer the task of creating lumber, while teaching the participant how to interact with the game. There have been many studies since then researching and testing similar introduction techniques. Our study will look beyond how a game introduces a skill, seeking to identify not how easy the tutorial is to use, but what is it neglecting to teach. The observation of experienced players with deep game knowledge will provide insights into what an expert wishes they knew when they began the game. We can learn which skills, interactions, or tidbits experienced players find most helpful during play, regardless of whether or not they are currently included in the tutorial.

Within Scope

The study will include novice participants who have a working knowledge of the console and its peripherals. These participants may have expressed some interest in Tomb Raider or similar games, but have no experience playing. They will work through the first hour of gameplay while being observed and coached by an experienced player. We will not explicitly identify tasks for the participants, but instead use an internal task list to structure the study. We will also conduct a short interview to reveal any final insights before ending each session. Further details of the testing methods are provided later in this plan.

Out of Scope

Players will not be playing far enough into the game to encounter advanced play techniques, which include high-stress activities that require mastery of the acquired skills. We recognize, as play becomes more intense and demanding, an experienced player's coaching might be particularly valuable to a new player for hints at success and encouragement in the case of failure.

Also out of scope for this project will be testing the first hour of gameplay for novice users without an experienced player. The lack of a human coach would put the responsibility of all game knowledge on the tutorial system. By conducting these solo tests first, we would gain an understanding of the "baseline" performance of novice players to which we could compare the performance of novices in co-discovery sessions, thus confirming the contributions of the experienced players in co-discovery sessions.

To obtain a complete view of successful and missing tutorial techniques, testing several games of the same genre would be appropriate. However, given the time constraints of the project we will be unable to test more than one game. Further recommendations for the stakeholder team would include similar tests using additional action-adventure games.

Co-discovery sessions lend themselves to providing insight beyond simple usability diagnostics. For this reason, we will focus our observations on what the experienced player can provide, that the tutorial of the game does not, and we will not focus on measuring usability problems of the game in general.

Goals

- Identify play points that are confusing or difficult for a novice player and how the experienced player coaches them through.
- Identify the nature of the knowledge an experienced player shares with novices, especially in ways that the system does not, to identify improvements in future releases within the action-adventure genre.
- Gather information about common behaviors and interactions that may contribute to a successful and enjoyable experience
- Produce summary of findings, along with recommendations, in a format that is easily consumable for stakeholders.
- Complete approximately 6 test pairs to allow reasonable generalizations to be pulled from our findings.

Method

Type of Study & Why

Based on the goals discussed by our stakeholder, a usability test that explores a user's ability to complete tasks successfully would be inappropriate for this project (e.g., the game is already released, without any plans for design iterations). Our study will naturally share some similarities with a standard usability test, but instead of focusing on detecting design problems, we will focus on understanding the interactions that occur between the two

participants.

During each of our tests, a novice will play through approximately one hour of gameplay in the presence of an experienced player, who is available to offer hints, tips, and other insights. Like a traditional usability test, we will record and analyze video for our testing sessions so that we are able to review key insights that might otherwise be missed.

Our goal will be to classify the types of interactions that occur between the two players in order to suggest improvements, ultimately making game tutorials more like social gameplay.

Who?

For our study, we will be recruiting participants in pairs, with each pair having a player experienced with the game and a novice entirely inexperienced with the action-adventure genre. We have developed two user profiles for these skill levels that will be used to recruit study participants.

We received some general guidelines from the project stakeholder and collaborated with other student teams to define the 'Novice' and 'Experienced' skill levels, with particular focus on recruitable attributes. We ideally would like to recruit individuals who have a friendly relationship with each other (e.g. a romantic couple, close friends, roommates, etc.) in the interest of replicating real-world social gaming dynamics – excitedly yelling, teasing, casually chatting, etc. (Klastrup 2003). Our two user profiles are defined below:

Experienced Users

For our experienced users, we are targeting active gamers who are heavily invested in the game's genre and who have experience with the 2013 installment of the Tomb Raider series. We want to recruit players who know the game well enough that they would be able to help the novice when asked, or even offer unsolicited input of their own during gameplay.

- 18 - 35 years old
- Very interested in action-adventure games
- 25 or more hours in Tomb Raider
- At least five hours per week playing console games
- Does not work in the gaming industry

- Has a friendly relationship with the novice user

Novice Users

For our novice users, we are targeting those who do not play video games very often and who specifically have very limited experience in the genre. They may live in the periphery of experienced gamers, but are more likely to use the console to watch Netflix than to play video games. We want to be careful to recruit novices who have at least some experience with console gaming, to ensure they will not struggle to understand the gamepad and we avoid testing the learnability of the gamepad or other hardware.

- 18 - 35 years old
- Familiar with controller and has played games before or at least interacted with a console for other uses - apps, music etc.
- Has not played Tomb Raider or other action-adventure games
- Less than 1 hour per week spent gaming
- Does not work in the gaming industry
- Has a friendly relationship with the experienced user

Number of Participants

Traditional usability practitioners provide various recommendations for the number of users to test during a study. However, many of these are driven by the likelihood that a certain percentage of problems will be detected, which may not be entirely appropriate for our project, as we are not explicitly searching for problems.

With the limited scope of our study, we plan to test 6 pairs of users, or 12 users total, per the recommendation of our stakeholder. We want to make sure that we have enough pairs to identify common occurrences, but not so many that we are overwhelmed with unnecessary or redundant data. Given more time, we would test a similar number of solo novice players, in order to compare the effect of adding an experienced player.

Study Protocol

Each testing session will begin with an introduction by the test moderator, describing what each user should expect during the session. A short pre-test questionnaire will help to confirm

the validity of the recruitment.

The novice will receive very little instruction, primarily just to play the game naturally, as if they were playing at a friend's house.

The expert will also be instructed to interact naturally, as if they were present when a friend was playing a game for the first time. They will be explicitly instructed not to take the controller and play themselves (which some experienced players might be tempted to do when they see the novice struggle).

Once the gameplay itself begins, the novice will play for 60 minutes, accompanied by the experienced player. We will interrupt as little as possible, only by request or if participants break the specified test protocol. During the session, we will take notes in order to capture the interactions that occur between the participants.

Following the 60 minutes of gameplay, we will conduct short, semi-structured interviews to learn about experiences of each player. Each player will be interviewed separately to encourage candid assessment. The base interview questions are included in the script.

In preparation for each session, we will make sure the controller has been sanitized; ensure that we have additional copies of the gratuity form, NDAs, and participant waiver form; and clear the previous game's progress. We will also make sure that the participants know the location of the closest restrooms for their comfort.

Testing Script

Welcome

Researcher 1:

“Thank you so much for showing up! My name is <<Name>>. This is <<Team Member>>. We are graduate students at UW working with the Usability Research Team here at Microsoft. <<Moderator>> works here at Microsoft and is helping us today.”

Researcher 1:

(Misc Ice Breakers)

“Have either of you been here before?”

“How did you guys meet?”

“<<Researcher 2>> will be hanging out behind the glass, basically running the computers and cameras. I’m going to stay in here...and take a few notes. We will be following a script...so we can make sure we say the same thing to all our participants. Sorry if it’s a little stiff.”

[Researcher 2 leaves the room]

“Ok, grab a seat on the couch and we’ll fill you in on what we’ll be doing here. First we need to have you sign these Non-disclosures. Basically they say that you won’t be discussing the details of this session other than the fact that you came here and played Tomb Raider. You also agree to be filmed and recorded while here.”

[Give the participants the NDAs and have them sign.]

“Thank you.”

“Now I can tell you what we’re up to. It’s pretty simple actually.”

“We are doing research on how people play games together. We are going to watch you guys play Tomb Raider and take notes. There’s no right or wrong. We are evaluating the game not you guys. Act like you are playing at home. The goal is to relax and have fun.”

“To help us understand what you are thinking we’d like you to tell us what you’re thinking while you play. You can talk about the game, whatever. The more talking the better.”

“Alright?”

[Participants should nod or say yes.]

“<<Experienced Player>>, since you have played the game before, your job is to help

<<Novice Player>> have a good time.”

“You can talk, jump up and run around, point at the screen, whatever. Just don’t take the controller out of <<Novice Player’s>> hands.”

“<<Novice Player>>, no rules for you. Explore the game. See where it takes you.”

“There are cameras in here, but try to ignore them. If you have any questions, feel free to ask but I may not be able to answer them during the session. If you still have questions at the end I will be happy to answer them then.”

“We are going to let you guys play for about an hour and then we’ll wrap up with some quick questions. After that we’ll get you your gratuity and you’ll be on your way.”

“You can stop the session at any time and for any reason...if you get tired...or don’t feel well...or if you are uncomfortable. But we’d really like you to stay for the entire session. Either way you will still receive your gratuity.”

“Any questions?”

“Ok. Looks like we are all settled. Here is your controller. Have fun.”

[Start 1 hour of game play. Set timer.]

After 60 minutes of gameplay

Researcher 1:

“Hey guys, it looks like you’ve been at it for about an hour. Ready to wrap it up?”

[If they want to keep playing let them go for another few minutes. Researcher 2 should come in around this time.]

“This looks like a good stopping point.”

“ Ok, now we have a few questions for each of you.”

“I’m going to hang out in here with <<Novice>>, and <<Researcher 2>> is going to take <<Experienced>> in the other room. That way we can get you guys wrapped up at

the same time.”

Novice Questions:

- How was it?
- What did you like about the game?
- Anything that you disliked?
- When did you feel like you were successful?
- What frustrated you?
- Was it helpful to have <<Experienced Player’s Name>> here with you?
- What did they do that was helpful?
- Were there any times when you might have stopped playing or given up if
- Was there anything they said or did that wasn’t helpful? Distracting?
- Do you prefer to learn a new game on your own or with someone who’s already played the game?

Experienced Questions:

- How was it?
- What was it like when you first learned to play Tomb Raider?
- Have you ever learned to play a game with a friend or in a social setting?
- Do you prefer to learn a new game on your own or with someone who’s already played the game?
- Why?

Wrap Up (Both Researchers)

“Here are your gratuity forms. There’s some cool stuff on there. You can pick out what you want now and give us the form, or you can mail it in. It will get processed and you’ll get your stuff in the mail.”

“Well, I think that’s it. Do you have any questions for us?”

“Thank you again for coming.”

[Direct players out, make sure they get gratuity, etc]

Success Metrics

Unlike a traditional usability study, our study will rely less on absolute success and failure of discrete tasks, focusing instead on the interactions that occur between the players throughout gameplay. For example, we may find that experienced players intervene before novice players have a chance to succeed or fail; this would be an acceptable result as it still contributes to social gameplay insights. Determining whether the novice could or would have achieved the task alone is not as pertinent.

Although we will not make discrete tasks visible to our players, we plan to focus on specific areas in the game in order to compare strategies across players. For example, we've identified one challenging puzzle early in the game in which the player must allow crates to stack up inside a cage, raise the cage, light the crates on fire, and then push the crates free. Despite not identifying this as a required task (the novice will naturally arrive at the puzzle without traditional prompting), we will be able to use it as a signpost by which to compare behavior and success across users.

Preliminary Task List: Linear Tasks

1. Story: Boat crash
2. Getting down from the ceiling and removing the spike
3. Lighting the torch and clearing a path
4. Cage puzzle
5. Running out of the cavern
6. Traversing the cliffs
7. Story: Video camera clips
8. Getting the bow and arrows
9. Killing the deer
10. Navigating back to camp
11. In the camp menu
12. Story: Radio Contact
13. Exploring the bunker
14. Story: Finding your friend by the campfire
15. Killing attacking wolves

Non-Linear Tasks

16. Exploring menus
 - a. Maps
 - b. Skills
 - c. Gear
17. Open chests to get salvage
18. Controller diagram
19. Video/audio controls

Behavioral/Experience Observations

Engaging in game is more than completing tasks, solving puzzles, and collecting treasure. To get the most out of the experience the player needs to progress, learn, explore, and feel validated, in other words “achieve flow”. One of the most interesting outcomes of a co-discovery study is the observable behavior of the participants and the qualitative data they can share with us through their actions, facial expressions, tone of voice, and focus. Outward signs of engagement and enjoyment might include:

- Pointing and gesturing
- Celebrating/validating successes
- Collaboration
- Critiquing the game
- Laughing
- Animated conversation
- Encouragement
- Providing context for decision making
- Getting lost/immersed in the experience (Jumping when the rock is about to crush you)
- Achieving an “a-ha” moment when learning something

For example, as Lara is trying to scramble out of the tunnel to daylight, she almost escapes when a villain attacks her a second time. At this point, we would look for signs (such as those listed above) that the two participants are physically and emotionally engaged and working toward a common goal. By noting and collecting data on these behaviors we can make correlations to game events to support current design, or indicate opportunities for

improvement.

Session #	Pointing/ Gesturing		Ah-ha Moment		Validating Success		Collaboration		Critiquing Game		Laughing		Animated Conversation		Encourage- ment		Context for Decision Making		Immersed in the Game		
	Nov	Exp	Nov	Exp	Nov	Exp	Nov	Exp	Nov	Exp	Nov	Exp	Nov	Exp	Nov	Exp	Nov	Exp	Nov	Exp	
	Boat Crash																				
Down From Ceiling																					
Remove Spike																					
Light Torch/Clear Path																					
Cage Puzzle																					
Running Out of Cavern																					
Traversing Cliffs																					
Video Camera Clips																					
Bow and Arrows																					
Killing Deer																					
Navigating to Camp																					
Cutscene																					
Exploring Bunker																					
Friend @ Campfire																					
Killing Wolves																					
Menu: Maps																					
Menu: Skills																					
Menu: Gear																					
Chests for Salvage																					
Controller Diagram																					

Above: sample task chart, see appendix for full-sized recording table.

Location and Timeline

We will use the testing facilities that our stakeholder has made available at Microsoft Studios User Research. These labs are equipped with professional recording equipment and are configured to be comfortable and representative of realistic living spaces. We considered running tests in participants homes to encourage natural interaction and ensure their comfort, however the inconsistency and unpredictability make this option impractical for this study.

We expect each testing session to last approximately 2 hours. This includes an introduction to the study, approximately one hour of gameplay, a short interview with each participant separately, and a debrief session with both participants, as well as a buffer for any unpredicted difficulties.

Before finalizing our study plan, we intend to run a pilot test session to confirm that everything runs smoothly. Following this pilot session, we will make any necessary tweaks to our methodology in preparation for our actual test sessions.

We were fortunate enough to be able to use the Studios User Research recruiting team to help us schedule our participants. We created screeners for the team and a sample ad to help them target our users. (see Appendix)

Our pilot test session will take place Sunday, February 23rd, 2013 from 10am-12pm. We have up to 8 tests that are tentatively scheduled for Saturday, March 1st and Sunday, March 2nd.

Gratuities

Our class contact has provided the Microsoft standard's gratuity form and Studios User Research will be able to provide gratuities to our participants.

Edits after Pilot Session

After running our first session in the lab we made some minor edits to the script and test plan to address issues that came up.

- Removed the formal 'Think Aloud Protocol' from the plan and script. We felt that the interaction between participants seemed to be more conversation and fast-paced. While TAP is somewhat standard practice in usability studies, pausing the session to remind the participants to use TAP might hinder the natural conversation. We plan to informally encourage participants to express their thoughts while playing but we will not interrupt to ask them about their thought process during the game play. We believe that this will keep interactions as natural as possible.
- Added cues in the script for the NDA.
- Added several tasks to the task list and revised the descriptions to indicate when the task was coming up.

References

1. Klastrub, Lisbeth. *"You can't help shouting and yelling": Fun and Social Interaction in Super Monkey Ball*. Center for Computer Games Research, IT University of Copenhagen.

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Participant Screener – Novice Player

Co-Discovery Usability Testing on Tomb Raider

This survey is assuming an online questionnaire format and email confirmation.

Introduction/Confirmation of Novice

Guess what? <<Name>> wants you to come and hang out at Microsoft Game Studios and play with them.

No pressure, just playing a game for a few hours. At the end we'll ask you a few questions and then send you on your way with something out of our prize box. (Believe me this stuff is much better than what you used to get from the dentist when you were a kid.)

You in? (Yes/No)

Questions

1. How old are you?
2. Are you free on (date/time) to spend a few hours playing and talking about video games?
3. Do you work in or have you taken classes in either of the following areas?
 - a. Game development or design (Yes/No)
 - b. User experience design or development (Yes/No)
4. Have you ever played computer games?
5. Have you every played games on a mobile device?
6. Do you know how to use a controller for an Xbox, Playstation, or Wii to navigate, watch movies, or play music?
7. On average, how many hours a week do you play video games?
 - a. Less than 1 hour
 - b. 1-5 hours
 - c. 5-10 hours
 - d. 10-15 hours
 - e. 15+ hours

8. Have you every played any action adventure games before?

If so which ones?

9. Have you every played any of the games below?

- a. Assassin's Creed series
- b. Tomb Raider
- c. Grand Theft Auto series
- d. Call of Duty series
- e. Gears of War series
- f. Batman Arkham series
- g. Uncharted series
- h. Infamous series

10. What are three of your favorite movies:

Wrap up Message

Thank you for your time and participation. We'll let you know by email in the next 24 hours if you and <Name> are chosen for this study. Sometimes we get more responses than we have spots for. If that's the case we will keep your information on file and contact you when we have another study that fits your interests.

Qualifications For Study

- 1. Must be between 18 and 35 years old
- 2. Yes - Must be available on (date/time)
- 3. No to both
- 4. Yes – to either 4 or 5
- 5. Yes – to either 4 or 5
- 6. Yes
- 7. Less than 1 hour
- 8. No
- 9. No to all
- 10. Doesn't matter

General Definition of Novice User

18 - 35 Years Old

Familiar with controller and has played games before or at least used a console for other uses - apps, music etc.

Haven't played Tomb Raider or other action/adventure games

Less than 1 hour per week on console gaming

Does not work in the gaming industry

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Participant Screener – Experienced Player

Co-Discovery Usability Testing on Tomb Raider

This survey is assuming an online questionnaire format and email confirmation.

Introduction/Recruiting Language

You can be part of the next generation of gaming! We're looking for gamers and their friends, girlfriends, wives, or co-workers. Basically we want to know more about how people play games together and we need your help.

You'll get to come to Microsoft Game Studios, hang out, and play games for a couple hours. At the end we'll ask you a few questions and then send you on your way with something out of our prize box. (Believe me this stuff is much better than what you used to get from the dentist when you were a kid.)

You in? (Yes/No)

Questions

1. How old are you?
2. Are you free on (date/time) to spend a few hours playing and talking about video games?
3. Do you have a friend or significant other who has never really played action/adventure games?
4. Will you be able to bring them with you on (date/time)?
5. Do you work in or have you taken classes in either of the following areas?
 - a. Game development or design (Yes/No)
 - b. User experience design or development (Yes/No)
6. On average, how many hours a week do you play console video games?
7. What's your favorite game?

8. How many hours have you played the games below? (Estimate over the past 12 months.)
- a. Assassin's Creed series
 - b. Tomb Raider series
 - c. Grand Theft Auto series
 - d. Call of Duty series
 - e. Gears of War series
 - f. Batman Arkham series
 - g. Uncharted series
 - h. Infamous series
9. How often do you play games with friends or acquaintances?
- a. Weekly
 - b. Monthly
 - c. A few times a year
 - d. Rarely
10. Have you ever taught someone else to play a console video game?
- a. (Yes/No)
11. The person you will be bringing with you needs to fill out a quick survey similar to this one. Please enter their email address and/or phone number?

Qualifications For Study

- 1. Must be between 18 and 35 years old
- 2. Yes - Must be available on (date/time)
- 3. Yes - Must have friend or significant other that can attend study...see novice questionnaire for details
- 4. Yes – Must be able to bring friend/SO
- 5. No to both
- 6. 5+ Hours Week
- 7. Doesn't matter
- 8. 25+ Hours total with Tomb Raider
- 9. Doesn't matter
- 10. Doesn't matter
- 11. Need email/phone

Wrap up Message

Thank you for your time and participation. We'll let you know by email in the next 24 hours if you and <Name> are chosen for this study. Sometimes we get more responses than we have spots for. If that's the case we will keep your information on file and contact you when we have another study that fits your interests.

General Definition of Experienced User

18 - 35 Years Old

Very interested in Action/Adventure games

25 or more hours in Tomb Raider

At least five hours per week playing console games

Does not work in the gaming industry

Has a friendly relationship with the novice user

