

ASSASSINS CREED IV TUTORIAL USABILITY

PROJECT OVERVIEW

Our team conducted a usability test on the tutorial system for Assassin's Creed IV: Black Flag (AC4). Our goal was to *evaluate the tutorial system and characterize its effectiveness for experienced users.*

PURPOSE

Microsoft Studios User Research was interested in exploring how experienced gamers use a tutorial system when playing a new game title. The study was conducted with regards to a co-discovery study of expert and novice gamers playing AC4. While our study is a standalone evaluation of experienced gamers using the AC4 tutorial system, the findings may aid in a greater understanding of the co-discovery.

RATIONALE

To evaluate the effectiveness of the AC4 tutorial system for experienced gamers, we formulated three objectives for our findings:

1. Identifying helpful tutorial information
2. Identify superfluous tutorial information
3. Identify confusing and absent tutorial information

Each objective was broken down into measurable research questions. The methodology of data collection for our research questions included a participant talks aloud, a post-study questionnaire, and a post-study semi-structured interview.

EXECUTIVE SUMMARY

Below is a summary of the most salient information and our recommendations regarding the objectives of

1. Identifying helpful tutorial information,
2. Identifying superfluous tutorial information
3. Identifying confusing and absent tutorial information.

HELPFUL TUTORIAL INFORMATION

Intermission Tutorials

An intermission tutorial prompt is when AC4 pauses and provides an explanation of how to perform a proceeding game function (Figure 1).

Participants who voiced praise about specific tutorial prompts, reported the intermission tutorials were the most helpful (4/4 participants).



Recommendation: Include more intermission tutorials for the most novel and difficult game features in Assassin's Creed IV.

SUPERFLUOUS TUTORIAL INFORMATION

From our observations and post-test interviews, all participants felt that the tutorial prompts were necessary and none were irrelevant or superfluous. AC4 did an excellent job reinforcing familiar concepts without burdening our participants.

CONFUSING OR ABSENT TUTORIAL INFORMATION

Mini-Map

The mini-map is located in the lower left hand corner of the screen and is a map which acknowledges NPC's and items of interest (Figure 2). All of our participants (6/6) misinterpreted the mini-map north arrow for an objective marker and struggled with understanding map icons. Pressing the (RB) brings up a map legend to explain the icons; there was no tutorial prompt for pressing (RB) until much later in the game study.



Recommendation: Place an "N" above the North arrow on the mini-map to ameliorate confusion with the arrow being the objective marker. We also recommend providing the tutorial prompt for the (rb) mini-map legend as soon as the player is able to explore on his or her own so there is context given for the iconography.

SUPPLEMENTARY TUTORIAL INFORMATION

All of our participants (6/6) were unsuccessful in finding previous tutorial prompts or additional tutorial information. At one point in during game play, each participant entered the start menu (Figure 3) to find out more tutorial information or previous tutorial prompts. This information either does not exist or participants were unsuccessful in finding it.

Recommendation: Make previous tutorial information salient within the start menu. This could be accomplished by having the information present in a category called “tutorials.”

CLIMBABLE AREAS

Assassin's Creed game play features parkour climbing as a prominent feature of navigation. 5/6 of our participants voiced they were confused as to what is climbable and desired hints concerning what exactly the player can climb.



Recommendation: Have hints such as a yellow highlight on climbable structures for a player struggling to proceed. Let the player know when an object is non-climbable after repeated mistake.

RESTRICTED AREAS

In AC4, restricted areas are designated by red circles on the mini-map and within them the guards will act hostile towards the player if they are detected (Figure 5). 4/6 participants were regressed in objective progress by going to alternate areas and voiced confusion and upon entering the restricted area. We found that the confusion stemmed from other games such as Call of Duty or Battlefield with restricted areas that cause death to the player.



Recommendation: Have a tutorial prompt regarding the definition of “restricted area” and what the player can expect upon entering one. Also, one could change the terminology from “restricted” to “hostile.”

CONCLUSION

Overall, AC4 has done an excellent job providing an effective, easy to understand tutorial for experienced gamers. Confusion within the tutorial stemmed from tutorial prompt timing, a lack of supplementary information, unfamiliarity with the Assassin's Creed series, and terminology misinterpretation from other games.

TABLE OF CONTENTS

Project Overview	1
Purpose.....	1
Rationale	1
Executive Summary	2
Helpful Tutorial Information	2
Intermission Tutorials	2
Superfluous Tutorial Information	2
Confusing or Absent Tutorial Information	2
Mini-Map	2
Supplementary Tutorial Information	3
Climbable Areas	3
Restricted Areas	3
Conclusion	4
Table of Contents	5
Methods	6
Background.....	6
Initial Research	6
Personas	6
Final Personas	8
Study Summary.....	9
Exploratory Study	9
Research Objectives.....	9
Measuring the Objectives	9
Research Measures	10
Screening Participants.....	11
Test Environment.....	11
Limitations	12
Detailed Findings	12
Participants Summary	12
AC4 New Game Features	12
Helpful Tutorial Information	13
Superfluous Tutorial Information	15
Confusing or Absent Tutorial Information	15
Identify absent tutorial information	16
Discussion.....	16
Next Steps	17
Domain knowledge	17
Screener	17
Pilot test	17
Research questions.....	17

METHODS

BACKGROUND

Assassins Creed is a historical action adventure open world video game for the XBOX, PC and other game consoles. Initially released in 2007 the game has released 4 subsequent titles, with the most recent title released in 2013, Assassin's Creed 4: Black Flag. The study was initiated by Microsoft Studios User Research desire to better understand the experienced user and their use of a games tutorial system while playing a new title within a known genre.

INITIAL RESEARCH

Two of the team members had experience within the game genre, with one member having specific knowledge of the Assassins Creed series. The team played AC4 on several occasions to gain a better understanding of gameplay and the tutorial system. The domain knowledge of the study of varied widely among the team members, and the team believed in the importance of increasing the knowledge of AC4 and its tutorial for all team members. A Video recording was created from the beginning of gameplay to approximately 80 minutes into the main storyline of the game. In-game videos on Youtube were also reviewed and allowed the team to categorize tutorial types and document new features specific to AC4.

PERSONAS

Developing personas for the study began with an interview with the study stakeholder. This discussion revealed the following traits that the stakeholder has used to define an experienced action-adventure gamer (fig 5.0)

Sex	Male
Age	18-35
Gameplay	10+ hours in genre
Gamer Series	Previous experience in game series.

(fig 5.0) Experienced Gamer Microsoft Studios

The stakeholder has had significant experience in usability testing and is reliable source for this genre. Based on this discussion we used these requirements as a foundation to begin framing the characteristics of our primary persona.

Our team utilized a method which has been outlined by Tamara Aldlin. We brainstormed appropriate titles and characteristics for our persona (Figure 7.1). After focusing relevant titles and characteristics, we brainstormed needs and wants for this audience (Figure7.2). This method enabled us to focus our audience on specific types of people in which we could gather more detailed information about.

After our initial evaluation our study team realized that one of the team members closely fit our initial characterization of the primary persona. The team member also had no previous experience with AC4,

the game being tested. Our team decided to perform an unstructured interview and document the responses with the team member to gain insight on specific habits, personality characteristics, and motivations of an experienced gamer.

The final personas were a culmination of our interviews and brainstorming. The research team identified one primary persona (fig 10.1) and one secondary persona (fig 10.2) that fit the characteristics uncovered in our research. While the primary persona defined a person who is actively gaming, we also considered possible edge cases. For example, there are many experienced gamers who do not have sufficient time to game on a regular basis, but wanted to consider these cases in our study as well. They are an important group or users that have the experience of the primary persona in the genre, but just don't consistently play the game on a weekly basis.

FINAL PERSONAS



Andrew Action Experienced Gamer

Age: 22
Job: Bank Teller
Location: Madison, WI
Relationship: Single

The best video games:

- Are easy to pick up, but challenging to master.
- Have engaging stories.
- Have fast-paced action.
- Have cool graphics and animations

"It takes me no time to jump into a brand new adventure!"

On Assassin's Creed series: "I love the series, but the gameplay is very formulaic."

On Gameplay "I expect to be able to customize gameplay controls."

On Tutorial "I don't want tutorials to be a waste of time. They should only highlight the new features."

Video games have been Andrew's favorite hobby for over 10 years! He plays his Xbox 360 about two hours every day and the last game he enjoyed was Dishonored. Andrew loves single-player games to engage with the story; the competitive nature and monthly cost of multiplayer games is a large deterrent for him. As an active member on Reddit /r/gaming forums, Andrew knows all the latest gaming news.

Andrew will persist and overcome challenges - he has been known to marathon play when close to completing a goal. He likes to take his time and get all the achievements when exploring a game. When he is not gaming, Andrew likes to play pickup basketball and read fiction books. He doesn't mind his job, but his dream is to one day write the story for video games.



Frank Freetime Experienced Gamer

Age: 25
Job: Software Developer
Location: Seattle, WA
Relationship: In a relationship

Core Values of gaming:

- Easy to pick up, but challenging
- Leverage and existing skill set already learned
- Not concerned about achievement just good game play.

"I want the game time I have to be good."

On Assassins Creed "I don't have time to learn a new genre so I just play the ones that I know I'm good at"

On Gameplay "I just want to have fun with the time I have. I'm not looking for any achievements"

On Tutorial "As long as I can use the controls I'm use to I'm good to go"

Frank loved to play video games growing up and throughout college, but since his new programming job, he's not able to dedicate so much time to games. He has a girlfriend of one year, but she is not interested in gaming at all. Frank likes to spend his weekends going out with friends or playing the most recent games with all the money from his new job.

In college, Frank used to engage heavily with the storyline and objectives. Now games act as escapism from the intensity of his new job and relationship. Frank wants a new game to be easy to learn and a contain an evocative environment to get lost in. Frank is a family man who helps support his parent's retirement when he gets a bonus.

STUDY SUMMARY

This usability study is mainly exploratory in that we will look to generate hypotheses regarding experienced gamers using the AC4 tutorial system. In doing so, we gathered assessment data about the effectiveness of the AC4 tutorial system for experienced gamers. We collected quantitative data about game function execution, categorization of tutorial prompts, and confidence in learned game functions. We also collected qualitative data on participants' experiences using the tutorial system.

EXPLORATORY STUDY

During the study all participants were playtested through AC4 from the beginning. We conducted 6 individual 1.5 hour usability study sessions. The first 15 minutes of each session was used to explain the session to the participant and confirm basic background information with the participant. During the middle 1 hour, participants played to progress through AC4. The last 15 minutes were reserved to administer our post-survey and interview and with the participant.

While AC4 contains features and game functions that occur past 1 hour of gameplay, the main tutorial system is presented within the 1 hour. Because of this, the study was planned for participants to play from the beginning of AC4 with the task of progressing through the game story for 1 hour.

RESEARCH OBJECTIVES

To evaluate the effectiveness of the AC4 tutorial system for experienced gamers, we formulated three objectives for our findings. These were formulated in a response to the usability team's initial game play which led to an understanding of the tutorial system. They are as follows:

1. Identifying helpful tutorial information
2. Identify superfluous tutorial information
3. Identify confusing and absent tutorial information

MEASURING THE OBJECTIVES

In order to measure our research objectives, we formulated measurable research questions for each objective:

Identifying helpful tutorial information:

1. Is the participant able to perform game functions novel to AC4 on their first attempt?
2. What familiar action-adventure game functions are reinforced without hindering the user?
3. Which tutorial prompts does the user find helpful?
4. How confident is the user in performing game functions?

Identifying superfluous tutorial information:

1. What game controls do users perform before their respective tutorial prompt?
2. Which tutorial prompts does the user find unnecessary?
3. Was any part of AC4 tedious for the user?

Identifying confusing tutorial information:

1. Which tutorial prompts does the user find confusing?
2. Which sequences of AC4 are confusing for the user?

RESEARCH MEASURES

We collected both performance and preference measures as indicated in table 10.1. Given the nature of the study these were chosen as the most accessible measures that would provide valuable data.

<p>Performance:</p> <p>Collection Method: Observation</p> <ul style="list-style-type: none">• AC4 new game function errors [1]• User execution of game function prior to tutorial prompt [5]
<p>Preference:</p> <p>Collection Methods: Talk aloud</p> <ul style="list-style-type: none">• Perceived effectiveness of each tutorial prompt [2, 3, 6, 9]• Perceived feeling of game sequences [7, 10] <p>Surveys</p> <ul style="list-style-type: none">• User confidence rating for game functions [4]• User confidence in tutorial effectiveness.[3] <p>Semi structured-interviews</p> <ul style="list-style-type: none">• Perceived effectiveness of each tutorial prompt [2, 3, 6, 9]• Perceived feeling of game sequences [7, 10]• Missing information to advance [8]• confusing information during gameplay [10] <p>[#] Research Question</p>

figure 10.1 Collection Measures

SCREENING PARTICIPANTS

Screening of participants were performed by creating a screener survey(see Appendix) to screen for desired characteristics uncovered in our persona research. A conscious effort was made to screen out candidates with previous experience in AC4. The screener was also created to check for specific genre experience by asking experience in games in AC4 genre and out of AC4 genre. (fig. 10).

Age	18-35
Console	min. XBOX 360
AC 4 Experience	None
Experience in genre	Yes

Figure 10. Major Screening Characteristics

TEST ENVIRONMENT

Participants of the study were pre-screened using Microsoft resources to screen prospective candidates in their participant database using the study screener. Observations for the study were conducted in the Microsoft studio's usability labs on the Microsoft campus in Redmond, Washington (fig 11.0).



figure 11.0

The usability lab used in the study was equipped with a two-mirror to separate the observer and participants. The lab was also able to record voice and video of the participant from various location within the testing room.

LIMITATIONS

The nature of our study had a few inherent limitations. To obtain an accurate view of how someone would actually use the AC4 tutorial, we required only one task of them which was to progress the game story. In this sense we were limited in how we could measure traditional metrics, such as time on task, on certain game features considering there was only one task.

Participant play style also has significant effects on using the tutorial. For example, some gamers enjoy exploring an area fully while others want to progress quickly through the story line. The way different participants play the game will affect which paths and actions participants take while learning information in the tutorial. This requires us to rely heavily on moderator observation, the talk aloud, and our post-study methods.

One last limitation deals with the nature of the AC4 tutorial. The tutorial is contextual, meaning that tutorial information appears when a game feature is about to be used. Many of the new features in which the tutorial covers are not covered within the first hour of gameplay. This means we won't be able to do a comprehensive review of the tutorial, only what participants experience within the first hour of gameplay.

DETAILED FINDINGS

Our findings are presented in response to our overall objectives and their respective research questions. Please refer to our summary of findings to see a complete tabulation of what we collected

PARTICIPANTS SUMMARY

- 6 Participants; 5 Male / 1 Female
- Age Range: 18 - 35; Median = 33.5
- 6/6 Own an Xbox 360.
- 6/6 have NOT played AC4.
- 6/6 have 10+ hours experience in action-adventure genre.
- 3/6 have experience with other Assassin's Creed games.
- 0/6 develop games or work in games industry.

AC4 NEW GAME FEATURES

To explore the AC4 tutorial effectiveness, we used the first five new features exclusive to AC4 which displayed in the game as our test sessions. They are ship combat, ship navigation, stalking zones, smoke bombs, and eagle vision. By focusing on the new features we are able to more accurately gauge how effective the tutorial is in explaining new concepts.

- 6/6 of participants progressed through the ship combat, ship navigation, and stalking zone tutorials
- 4/6 of participants progressed through all the tutorials.
- 2/6 of participants did NOT progress to the smoke bomb and eagle vision tutorials.

HELPFUL TUTORIAL INFORMATION

1. Is the participant able to perform game functions novel to AC4 on their first attempt?

- All participants (6/6) were able to execute ship combat, ship navigation, and smoke bombs on their first attempt.
- (3/6) participants were able to use eagle vision successfully their first time. The other (3/6) who used Eagle vision did so before the tutorial information prompts; they claimed it was confusing to understand at the first time.
- (4/6) were able to use stalking zones their first time. (2/6) decided not to act stealthy or were frustrated using them and just attacked.

2. What familiar action-adventure game functions are reinforced without hindering the participant?

- Basic movement, camera control, and using the menu screen is familiar and unobtrusive for all participants. All participants (6/6) could run, walk, move camera and enter start menu without any tutorial.
- Basic fighting was performed well by all participants (6/6). Contextual buttons displayed in the upper right helped them to guide familiar controls.

3. Which tutorial prompts does the participant find helpful?

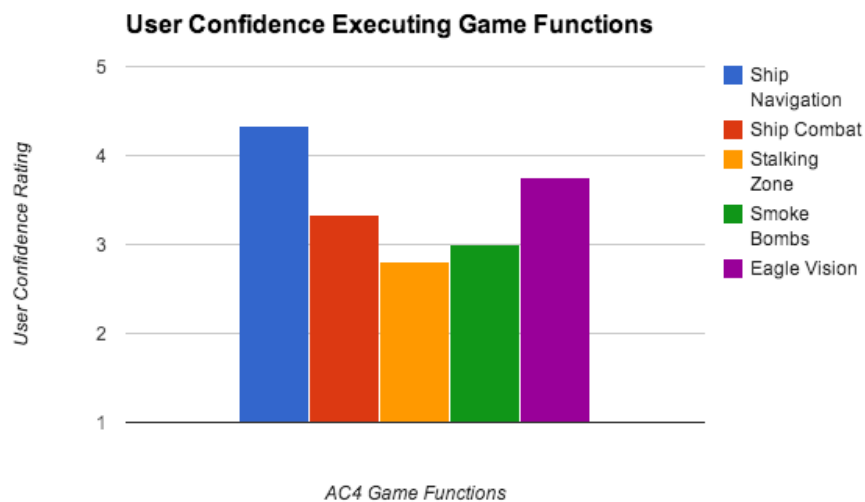
- There are three types of tutorial prompts, intermission tutorials, bottom screen tutorials, side panel tutorials.
- The intermission tutorials, which stopped and displayed a large information screen, was held as the most helpful from 4 participants.
- 3 participants found the bottom screen tutorial, which would appear and disappear fairly rapidly helpful.
- 1 participant said the side panel tutorial was helpful, which is additional information about a game construct that would appear towards the right side. He claimed it is very useful.
- From our post-survey, participants have varying perceptions of how helpful the tutorial prompts are in explaining the new game features (1=least helpful, 5=most helpful).



- Participants feel the tutorial information of ship combat is the least helpful (Average of confident = 2.3).
- Participants feel most useful tutorial information are smoke bombs and eagle vision (Average of confident = 4.5).

4. How confident is the participants in performing game functions?

- From our post-survey, participants have varying confidence levels in performing game functions (1=least confident, 5=most confident).



- Participants feel most confident using ship navigation (Average of confident = 4.3)
- Participants were least confident using stalking zones (Average of confident = 2.80)
- Participants' confidence in executing a game feature and their perception of the game features' respective tutorial are highly related. When participants felt confident in controlling the new features, they also felt that tutorial was useful.

SUPERFLUOUS TUTORIAL INFORMATION

5. What game controls do participants perform before their respective tutorial prompt?

- The participants (2/6) who have significant previous experience of Assassins Creed were able to map previous control experience over to the new game, eg. freerunning, climbing, advanced fighting (parry +combo).
- Synchronizations were performed by some participants (3/6) at the jungle way before the tutorial prompt. Those participants claimed they learned synchronization from AC series.

6. Which tutorial prompts does the participant find unnecessary?

- All participants (6/6) claimed the tutorial prompts necessary at the post-interview.

7. Was any part of AC4 tedious for the participant?

- Participants were observed and self-reported they were bored during the Abstergo sequence.

CONFUSING OR ABSENT TUTORIAL INFORMATION

8. Which tutorial prompts does the participant find confusing?

- Based on the post-survey, the ship battle tutorial prompt was the least helpful. This may be because the tutorial did not explain that the participant was supposed to navigate the ship during this sequence. One participant commented that "...I didn't realize he was on the boat at the beginning."
- The stalking zone prompt timing was off in the sense that the participants (2/6) would enter the fighting area then be prompted with stalking zones tutorial after the chance to use them. The participant commented "...[the tutorial information] is too late!"
- (2/6) participants voiced or were observed missing the bottom screen tutorial information in the heat of the action when fighting or chasing an enemy.

9. Which sequences of AC4 are confusing for the participant?

- Out of the four participants who made it to the smoke bomb tutorial, (2/4) displayed a difficult time switching back to swords after the scene.
- 3/6 participants misunderstood the term "reach" to mean grab not as a destination to "reach."
- 4/6 participants were confused when entering a restricted area. Even with a dialogue cue from the main character, players turned around and went opposite of the objective with one participant returning to the beginning of the level. In the post-interview we found the confusion stemmed from restricted areas in other action games like Call of Duty and Battlefield.
- All participants (6/6) struggled with understanding the mini-map in the lower left hand corner. The first issue was the mini-map north arrow with an objective marker. All participants were also extremely confused about the iconography on the map. Pressing the (RB) brings up a map

legend to explain the icons; there was no tutorial prompt for pressing (RB) until much later in the game.

- We observed (3/6) participants activate Eagle Vision unintentionally. Pressing the (L-stick) inward triggers eagle vision. In popular games like Call of Duty, this button causes the player to sprint to sprint. Cross over control schemes from games like Call of Duty, Tomb Raider, and Battlefield had effects on people activating Eagle Vision before it's respective prompt.
- 5/6 participants felt the beginning ship battle sequence was "disorientating" and did not describe how to actually steer the ship which the participant controls, only explaining how to fire the cannons.
- 3/6 participants were confused while climbing up to the church in the Havan sequence. They did not know how to drop down to lower levels. This resulted in 2/6 people jumping to their death when they only wanted to drop a level.

IDENTIFY ABSENT TUTORIAL INFORMATION

10. What information is the participant missing to advance the game?

- All participants (6/6), at one point, entered the start menu and failed to find out more tutorial information or previous tutorial prompts. This information either does not exist or participants were unsuccessful in finding it.
- (4/6) Participants voiced a need for there to be a tutorial prompt to describe the mini-map north arrow and how to access the mini-map legend with (rb) much earlier than it is prompted.
- (5/6) Participants reported that there needs to be a salient hint about non-navigable space, such as telling the participant not to climb the wall when the wall is not climbable.
- (3/6) Participants recommended that there should be more of a demonstration, either through a video or sandbox mode, in order to practice running, climbing, and fighting skills.

DISCUSSION

Overall, AC4 has done an excellent job providing an uncumbersome, easy to understand tutorial for experienced gamers. Every participant was able to progress through the game and reported that the tutorial provided a "good" explanation. 4/6 of the participants were able to complete each new AC4 feature on their first attempt.

The most helpful parts of the tutorial were the intermission tutorial prompts which provided an in depth explanation of what to expect. A recommendation we suggest is to provide intermission tutorials to explain the mini-map, climbable areas, restricted areas, and how to access more tutorial information.

Our participants found that every part of the tutorial was necessary. AC4 has done a great job by not providing information experienced gamers find basic or elementary.

Confusion within the tutorial stemmed from tutorial prompt timing, a lack of supplementary information, unfamiliarity with the Assassin's Creed parkour feature, and terminology misinterpretation from other games. Our recommendations include prompting the mini-map legend tutorial at the beginning of the first level, providing easy access to more tutorial information in the main menu, changing the terminology of "restricted" to "hostile," and highlighting what structures are climbable.

NEXT STEPS

Overall, the project went well. However, there are some steps we want to address in the future.

DOMAIN KNOWLEDGE

Domain knowledge is critical to usability testing, which defines the scope and tasks we are going to use. Although two teammates played AC4 to gain domain knowledge, two participants still found a new feature, the treasure map, which our team did not see before the test. Since we didn't include any methodology measures for the treasure map, we were not able to gain any measurable findings about the treasure map. In this respect, we should have more knowledge of the game before we are going to test.

SCREENER

Two participants seemed to not have enough experience during the game. Their control was not as fluent as the other four participants. While they did meet our requirement of 10 hours experience playing an action adventure game, in the future we should refine our screener to have more accurate participants.

PILOT TEST

When the participants were stuck in the game, we offered them different levels of guidance. For example, with our first participant who encountered significant difficulty, we did not provide any help. For our subsequent participants who had difficulty, we provided extra help to push them in the right direction. In the future, we need to run a pilot test to define the problems we may encounter during the test and establish a consistent direction for every participants.

RESEARCH QUESTIONS

Our research questions did a sufficient job covering all the tutorial information. However, some research questions did not accurately characterize the effectiveness of the tutorial, such as the question "Was any part of AC4 tedious for the participant?" This question could contribute to the game design but may not contribute to the tutorial validation. In the future, we should provide a more accurate research question list which directly reflects the tutorial evaluation.