Ultimate Frisbee Analytics

The Application created to Gather Data and Increase Team Success

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15 December 2022
CS 356 - Designing the User Experience
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PROBLEM STATEMENT:

Coaches and players of Ultimate Frisbee are unable to gather data for analysis to better their team success, the sport is too fast paced to recall stats afterward, and there is no platform for gathering data efficiently. As such, many programs are falling short of their team potential by not knowing how to best use their players.

JUSTIFICATION:

The year is 2002, Billy Beane is the GM for the Oakland A's. He is incredibly handicapped with the lowest salary cap in baseball. He realizes that in order to win, he must find a competitive advantage. While on a recruiting trip, he meets Peter Brand, a Yale Economics graduate. Peter hires him and they use statistical analysis to completely turn the Major League of Baseball on it's head. He knew which players to play at which positions, and which players worked best together. Billy managed his team based on statistics, and from this, his team went on to have the best record in the league, regardless of the salary situation he was in.

Now the year is 2022, and I'm not saying that I am a Billy Beane or a Peter Brand, but I have been around the sport of Ultimate Frisbee for over 10 years. It is a new and growing sport. At this current moment, I play Ultimate at BYU and assistant coach the professional team from Utah; the Salt Lake Shred. Our biggest weakness as an organization is our inability to know how to best use our players. This problem stems throughout the ultimate community in the country, there is no platform for gathering statistics from the game of ultimate frisbee.

As an assistant coach, I spend 5 hours after each game rewatching all of my teams film to write down these important statistics, as does every player on my team. From this unnecessary problem, there is a necessary and efficient solution. I believe creating an application that is built around the flow and speed of the game of ultimate frisbee provides a platform for coaches and players to further advance their success as a program.

PERSONAS:

Primary Persona - Bryce Minters (high-level coach)

ABOUT:

- Bryce is a coach of a college program
- He has been involved in Ultimate for 15 years
- He has to scheme properly and prepare for upcoming matches in order to win

GOALS:
- Bryce wants his team to perform at the highest level
- He wants to see a team develop of the course of a season
- To win a National Championship

MOTIVATIONS:
- He wants to be the very best
- To develop the sport into a national powerhouse, one that every child wants to play
- To help his team win every game

FRUSTRATIONS:
- Bryce is frustrated when we lose games we shouldn't lose
- He is upset to see other teams having success without working for it
- Gets frustrated when players on his team do not buy in to the team

Secondary Persona - Joe Merrill (high-level player)

ABOUT:
- Joe is a Captain for BYU
- He has been playing Ultimate for 5+ years
- He leads a team of 25 men to their tournaments
- He has to focus on his game before he can focus on everyone else's game

GOALS:
- Joe wants BYU to win a National Championship
- He wants his players to perform at their highest level for the longest time
- He performs high in the first couple games of a tournament
- To help his players perform as efficiently in game 8 as they did in game 1

MOTIVATIONS:
- His main motivation is to win every game
- To provide an opportunity for all players to play the sport
- To broaden the area in which Ultimate Frisbee is played

FRUSTRATIONS:
- Joe gets frustrated when his team loses a game
- He has little time to focus on the individual player's needs in the middle of a game
- Joe rarely finds himself in a position to help players know what to do to prevent cramps

TESTING ROUNDS / USER EVALUATIONS:

My initial application was very raw, it had a purpose and direction but wasn't fulfilling it's goal. User testing was very helpful in adjusting my application to the success it is now. My first application was created in the preface that it was going to purely gather points per game played by each player. I wasn't looking for much more beyond this.

In my first round of testing, I tested 7 different people heavily involved in ultimate frisbee; 4 coaches, 3 players. The design for data being presented was very positive, nearly everyone had it as their favorite part. The difficult part that was apparent in every participant, that the way in which data is gathered is not conducive to the sport. 4/7 participants found that trying to remember everything after the point ended was difficult. I had solved the problem of providing a platform, but it did not synchronize to the game like I had desired, the problem wasn't being solved efficiently. From the 4 coaches, I received the feedback that the necessity of this app (times in which they have specifically known they have needed an application for this) was an astounding 9/10, but that my application only fulfilled a 6.5/10. The 3 players gave the necessity a 8.5/10, and a fulfillment of a 6/10. Some of the coaches and players wanted a search bar.

My biggest takeaway from this first round of testing was that I needed to adjust my flow of the application to the flow of a game. I was hoping that my design of "remember what happened that point and enter it after" would be sufficient, but it was not. I needed to redesign my game portion of the application. In order to do this, I took the feedback of the participants and created particular situations for every point of the game and every avenue that is possible in each point. When the point starts, I have the application waiting for the user to input what has happened, and adjust the game as the point continues.

In my second round of testing, I tested a different group of people heavily involved in ultimate frisbee, this time it was 8 people; 5 coaches, 3 players. Knowing that my application was closer to the preferred design for it's purpose, I decided to time players on their ability to keep up with a standard game of ultimate frisbee by having them watch part of a game on the tv, and record the information as it comes. Remarkably, each participant recorded the information perfectly, and the longest it took any participant to record an event after it happened was 9 seconds. From the 5 coaches, I received the necessity of the application as a 8.75/10, and that my application fulfilled a 8.25/10 in fulfillment. From the 3 players, I received the feedback that the necessity was a 8.3/10, and my application's fulfillment was a 8/10. The biggest feedback was the desire for a search bar and player profiles.

There were some areas that were not addressed according to what the participants wanted. Many of the participants in each round wanted the ability to search for players statistics, or for there to be the option to touch a players name and a profile of them appears. While this would be a great addition for such an application, it would require a massive platform, one

bigger than the scope of this project, and a bigger bandwidth than I am able to complete. If this application were to come to fruition across the country, user profiles and searching abilities would be a necessity. But as the purpose of this application is to provide a framework for players and coaches to smoothly gather and analyze data properly, it was not necessary to add in a feature that doesn't fulfill the basic necessity the application fulfills.

TA TIPS:

The biggest consideration I would give to anybody who is looking to grade this application is this; the scope of who the application is aimed for is very narrow. It is meant for those who play ultimate at any level, not for anybody to stumble across. In order to understand the application's real necessity and how it functions, you have to understand how the game of ultimate frisbee works. When discussing this application idea with Professor Page, she mentioned that the grading might be difficult as the scope is so small and it would require more user feedback than normal. This is why I was in depth on the number of participants and the statistical feedback on necessity and how usable my application is for what is needed.