

iPhone Games

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Abstract

The purpose of this study was to identify the key features of an iPhone game that make it successful. A survey was given to iPhone users who gave responses to determine the most important factors in choosing a game. The participants rated the games based on Name, Color scheme, Sounds, Ability to level up, Competing against other people, Strategy involved, Rewards for success. The results of this study can be used to determine what users value most in iPhone games and help developers choose features to use when creating a new iPhone game.

Chapter 1

Purpose of the Study

The purpose of the study was to determine the main causes of failure and success of mobile game applications in the Apple iPhone App Store. This problem affects most app developers because not every app is a success. In fact, most of the 775,000 apps in the App Store are failures. If key reasons for failure can be determined, there can be a guide made for developers to follow to create a game with the best chance of surviving and thriving in the App Store. Along with that, avoiding pitfalls of the worst games by documenting all the common mistakes made by developers will allow developers to be more likely to succeed in the App Store. While the majority of this report can be applied universally to mobile application development, the sole focus of this study is games in the iPhone App Store because it is the area most developers make applications for at the time of this study.

The history of the iPhone app goes back to the creation of the iPhone in June of 2007. At its launch, the App Store had just 500 applications available. Apps now reach upwards of 775,000 plus apps with over 40 billion application downloads. Naturally, the beginning of the App Store brought many apps into the iPhone that users had never thought they could have with them on their mobile device. Flashlights, compasses, balances, alarm clocks, to do lists, sticky notes and much more were all in the user's hand in one small device with the slogan, "There's an app for that."

Developers in 2008 were looking for ways to use the iPhone to its full potential and many missed the mark. Apps at the beginning lacked the user experience iPhone owners expected from their purchase and left owners looking for something worth the download. To combat the lack of value, the App Store made a chart of the most popular apps for users to see what the majority of people were downloading, leading to those apps appearing on the majority of iPhone users devices. In some cases, though, certain apps would make it to the popular page for no reason other than the catchy name or logo associated with it. Users quickly found out after downloading these types of apps that the appeal stopped at the surface because the app turned out to be terrible and was deleted from the user's device. These occurrences still happen in today's version of the App Store, giving the developer of the app a quick 15 seconds of fame before they fade to the bottom of the charts. For this study, briefly popular Apps will be considered a failure. To be a success in this report, the App must have mass appeal, longevity, and be consistently in the top charts. It should be noted that the profitability and monetary issues are not addressed in the study. For some, the money is worth more than the ranking on the charts, but for this research the first step is to make it on the charts and the money issues would be a completely different study as a follow up.

Once developers began working on the development kit for iPhone applications, the App Store grew immensely. In just a year after its launch, the App Store had over 55,000 applications with nearly 1.5 billion downloads. To say the store had done well in its first year is an understatement, and the growth would only speed up. Apple revamped the look of the App Store along with new versions of the operating system for the iPhone.

These versions offered new abilities for the phone that developers could take advantage of with a wide array of new applications in the App Store.

Many new iPhone users are eager to download all the latest and greatest content for their phone, and the easiest way to do that is through the App Store's top charts. With an average of 40 applications per iPhone, users seem to be downloading increasingly often. This may be due to the large volume of applications currently available in the App Store, which makes the app developer's job even harder since they have to compete with many other apps. The chance for an App to be one of the 40 Apps on a person's iPhone out of about 755 thousand available applications is about .005%. This means developers must do something to catch user's attention. This research was done to determine what can be done in the development process to make a game that will be part of the average iPhone user's downloads.

Significance of the Study

The relation of iPhone applications to Graphic Communication is direct and growing all the time. The area of Web and Digital Media primarily deals with this subject matter, yet interest from all other sectors of Graphic Communication can be seen towards the subject. Printers are interested because the digital world is taking away from their jobs and putting print on the web. Packaging specialists care because if someone can buy a digital copy of a normally packaged product, fewer packages will be needed. Even management in Graphic Communication cares because applications are being developed that make communicating with employees and workflows much easier to manage. Also,

the field of Graphic Communication is directly associated with mobile applications because they communicate graphically to users in many ways.

This study was beneficial because it highlighted the common attributes of applications that have succeeded in the App Store, as well as the similar pitfalls that often appear in applications that fail. Creating a guide of what to do when creating applications was something that had been done before, but the results of this study differed because of the detail put into finding the exact attributes of the most successful games. There is a chance for these findings to not work when applied to an application, but this was understood because the formula cannot work every time.

Interest in the Study

My interest in this subject came from my personal usage of iPhone apps everyday. I have had experience with apps since I got the iPhone 3GS in 2008 to my iPhone 5 purchased in 2012. Personally I have seen the differences in good and bad apps because of downloading a fair share throughout my time with iPhones. There have been times when I cannot put down the phone because the app I used is addicting, and there have been times where an app gets downloaded, used once, and then deleted. Downloading three to four new apps and games a week, I believe my background with this topic is substantial. More personal interest in this subject stemmed from my participation in a mobile app design class here at Cal Poly. With a group of fellow students, I was able to create, develop, and market an application idea to a panel of business professionals, venture capitalists, and professors. This research helped verify and add to the information previously published about the mobile games on iPhones.

Chapter 2

Literature Review

Applications are the main component of smart phones in 2013 and appear to have a bright future whose potential has not been reached. Innovations in phone technology are occurring very rapidly. The race to be the first creator and the best provider of new technology is fierce. Likewise, competition exists in mobile application development. At the frontline of application development is the biggest genre of all the applications in the iPhone App Store, games. Several books have been written about how to make games for the App Store, which, in part, some developers credit for their success (Clark, 2010). It is hypothesized that successful iPhone games have a specific formula that makes them reach the top charts in the App Store, and this formula has yet to be discovered. The following literature review will focus on proving that hypothesis and moving towards a formula of a successful iPhone game.

Introduction to iPhone Games

The most downloaded and popular genre of applications in the iPhone App Store is games. Unfortunately, games are a difficult area to develop a successful application. To gain enough popularity to make it on the top 25 chart of the App Store, it is thought to take around 25,000 daily downloads for free applications in the gaming genre, and 2,280 for paid applications (Lardinois, 2012). These numbers are significantly less in other genres, ranging from about 3,000 to 7,000 daily downloads to make it to the top charts for free applications. Based on those numbers alone, application developers must

understand the challenge they begin by stepping into the gaming genre of the iPhone App Store.

Risk is always a factor when unveiling a project to the public, and it is especially risky when the company that developed the product has put in many hours and much money to get the product to market. This same principle is applied to applications and their developers, as they must be ready to face failure in a tough market for new developments (Olson, 2012). Once they have an established game in the App Store, developers have a better chance of making a variation of their game and reaching the top charts again than making a successful new game. For example, the developers of Angry Birds are said to have eleven successful games, with ten of those coming as spin-offs of Angry Birds (McDermott 2012). That would encourage anyone to start their own application development, but those same people who made Angry Birds had around thirty other games that reached nowhere close to the numbers that Angry Birds has reached. (McDermott 2012). These numbers may come as shocking to the average person, but to developers, it is the cruel reality they live with. The key is finding a niche or a “vacuum”. A niche is a place, employment, status, or activity for which a person or thing is best fitted (Merriam-Webster, 2012). A “vacuum” in this context is an area that has not yet been filled that needs to be filled. In the case of Angry Birds, the developers found something that iPhone gamers had not yet put their hands on and could not put down from their hands. To find a niche, developers must do market research and capitalize on a brilliant idea that no one else has had. Also, a good quality of a developer is patience. Without patience it is unlikely that a developer will have the ability to put in the time and effort it takes to make a game that reaches the top charts.

Aspects of iPhone Games

McDermott (2012) said, “Gamers crave innovation, but they hate everything new.” It is a tough task to be asked to make something new in an area that people do not want to see change, but that is the life of a game developer. The best way to make sure their game will make it in the App Store would be to break development down into a detailed process before publishing. Inspecting the game from every direction possible, market testing, research, and more research are needed to make the best possible game (Muretta, 2012). The areas to be most concerned about are ease of use, speed to learn, competitiveness, advancement, and visual appeal. Angry Birds is full of color and exudes a fun feeling. There is no log in needed to play and the first level that is played is a tutorial. The game is ultimately as simple as pulling, aiming, and tapping. It does not get simpler than that, but it does. Other games go as far as the only using the tap motion. If there were a grade for ease of use, that type of game would achieve the highest grade possible. Angry Birds is only a few steps more than tapping, so it sits very high on the ease of use list. Angry Birds does well by teaching users how to play with all the new characters once they are unlocked, another helpful feature.

The simplicity of this game, along with the other factors, lead Angry Birds to be a rather addicting game that users find very hard to put down. Another thing is that the target audience for Angry Birds is anyone with a phone. To reach such a broad group with a simple game is an accomplishment that cannot be taken lightly, and should be a quality other games strive to achieve. Already established in the market as a top game, developers of Angry Birds found it easy to make variations of their original game and

also have success with them (McDermott, 2012). That would be a more difficult accomplishment if the first version of Angry Birds was not as popular.

Why most applications fail is a mystery for many developers. According to Olson (2012), most applications fail because of low volume and limited appeal. There are so many similar applications in the App Store, developers must discover a solution to a problem users do not know they have. For games, it is even more difficult to break into the market because the amount of downloads needed to make it onto a top chart. Likely to scare many away because of the sheer volume of the available applications, game developers are some of the best at finding “vacuums” for their game (Olson, 2012). These are areas of the App Store that inherently want to be filled, like the application iTranslate Voice did. It discarded a “vacuum” left by Apple’s Siri and filled a void. Siri was the new voice command development of the iOS5 operating system for iPhones, a useful tool for hands-free controls and quick searches controlled by voices. What iTranslate Voice did, was give different functionality to the feature that Siri offered (Olson, 2012). Games have the same ability to fill “vacuums” that applications do, just in a different way. For example, games to utilize the iPhone’s accelerometer to its greatest potential are often in the top charts, as Temple Run and Doodle Jump have been (Kuehl, 2012). There are still “vacuums” to be filled in the gaming genre, leading developers to continue their search for these empty spaces, slowly but surely filling them with their own ideas.

Chapter 3

Methodology

The goal of this study was to discover the common aspects shared in successful iPhone games. There are many different types of applications for iPhones, but this report focused on games specifically in the top twenty-five most downloaded lists. Research was performed to discover why these games were more popular than all other games in the iPhone App Store. The objectives of this study were to determine what factors were most important to the success of a game, and what users wanted to see most out of iPhone games.

Data Collection Plan

Research was collected after obtaining a list of top twenty-five most downloaded iPhone games of all time. With this list, the most successful games could be studied and categorized to make a detailed list of the factors that make each game succeed. In person and online surveys were also conducted on iPhone users to find out whether these factors are truly important. The audience tested was iPhone owners between the age of 19 and 53, who were asked questions to get their opinion on the factors that make up a successful iPhone game.

Data Analysis Plan

Survey responses showed what iPhone users cared about most in a game. These responses were compared to the list of factors previously determined to discover if a

correlation existed between the success of a game and its design. The most important factors in a game were determined from the information gathered and studied

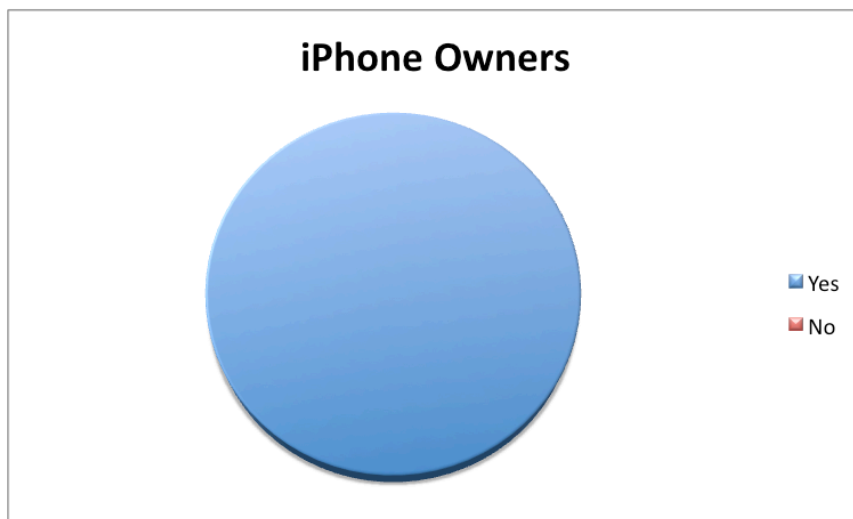
Chapter 4

Results

iPhone users were polled to see what the main factors of a game they liked. Questions were based upon the all-time top games in the App Store and aimed to discover what made a successful game. The discovery was made that there is not a specific factor that makes a game hit the top charts. While this was disappointing to see at first, the end result made sense. There were, however, multiple factors that the games shared that users cared about. This was a step in the right direction to create a list of factors game designers should really consider when designing a game. Below are the questions from the survey.

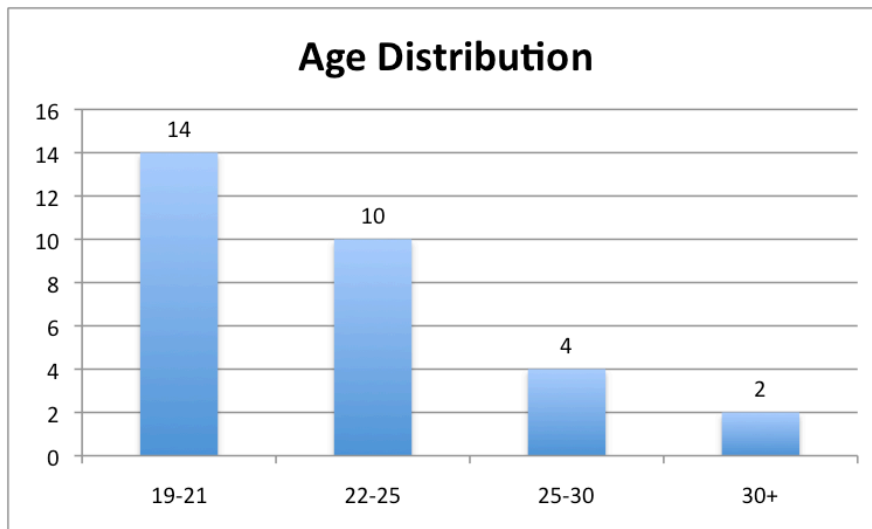
1. Do you own an iPhone?

This question was used to remove the unqualified subjects from the field. When they answered no, they were kindly thanked and asked to leave. 30 respondents answered yes, and those became the pool of responses.



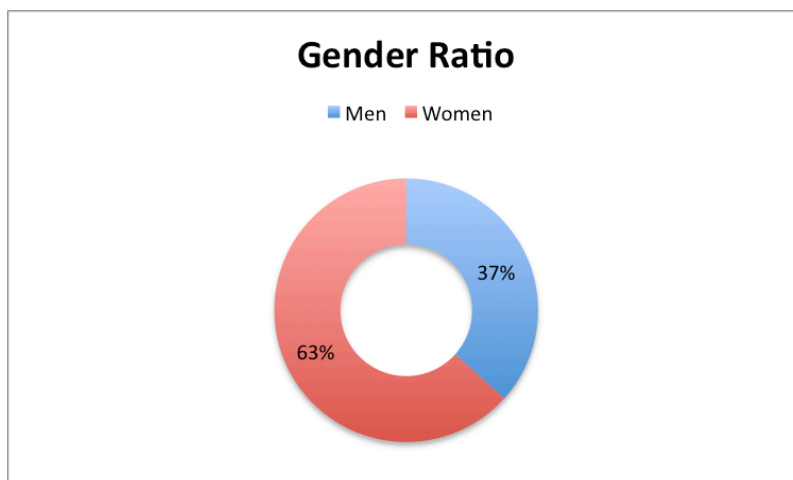
2. Please enter your age.

Ages of those surveyed ranged from 19 to 53 years old with an average age of about 23. This group is a good range for the study, as the audience would likely be those in the high school, college, and recently graduated area.



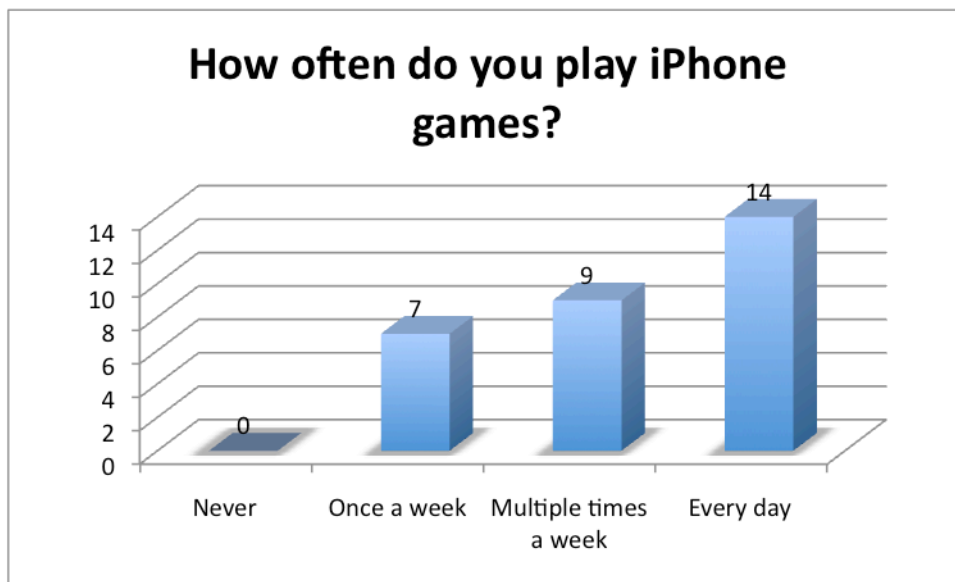
3. What is your gender?

The distribution of gender was 19 women and 11 males. While each have different preferences for their games of choice, this selection had a fairly similar responses across genders.



4. How often do you play games on your iPhone?

Those surveyed were given four different possibilities to answer here: 1. Never 2. Once a week 3. Multiple times a week 4. Every day. The most popular response was every day with 14 people making that their selection. That result shows that the survey has experienced users who really know iPhone games.



5. What is your favorite game for your iPhone?

Games expected in this response were games in the top charts in the App Store. The same response was seen with 6 people writing Candy Crush Saga and 5 choosing Words with Friends. These games are both in the top charts and have been for a long time. There were some responses that did not fall into the category of the top charts, but those were outliers only being mentioned once.

6. Please rank the factors that determine what game you chose.

Surveyors were given 7 choices to rank from 1 to 7 with 1 being most important and 7 being least important. The 7 choices were: Name, Color scheme, Sounds, Ability to level up, Competing against other people, Strategy involved, Rewards for success. The top 3 choices in order of average ranking were Strategy involved, Competing against other people, and Rewards for success. Last place was Sounds with second to last being Name and Color scheme.

Average Rankings

Strategy Involved =	2.52
Competing Against Other People =	3.14
Rewards For Success =	3.19
Ability to Level Up =	3.29
Name =	5.14
Color Scheme =	5.24
Sounds =	5.48

7. Describe your reason for your top ranking.

As with the previous question, the most common type of answer included a lot of competition, earning rewards, and strategy to advance. This was good to see as these factors reflect within most games on the top chart list. Below are some responses given to this question.

Feels good to get to the next level

4/17/2013 10:50 PM [View Responses](#)

I like being able to see that I'm making progress with the more I play.

4/17/2013 9:59 PM [View Responses](#)

i feel like a game isn't that fun to play unless there is some sort of strategy or goal

4/17/2013 8:33 PM [View Responses](#)

The game is very colorful, and adds a lot of appeal to the game.

4/17/2013 6:38 PM [View Responses](#)

i like strategy games

4/17/2013 1:40 PM [View Responses](#)

I like being able to progress and advance in the game.

4/17/2013 10:25 AM [View Responses](#)

Competition.

8. Describe your reason for your bottom ranking.

The resounding response here was that people play with their phones on silent and do not care what the game is called as long as it is fun. These are very valid reasons to take into account when making a game. Other reasons for bottom ranking are seen here.

I don't really think about the color scheme when playing

4/16/2013 9:28 PM [View Responses](#)

Would play the game regardless of the name

4/16/2013 9:23 PM [View Responses](#)

The name has no importance to me, its about the fun it creates.

4/16/2013 9:21 PM [View Responses](#)

I dont care if I compete with other. A quick game for a mobile device should be entertaining.

4/16/2013 9:19 PM [View Responses](#)

I usually have the sound off

4/16/2013 9:17 PM [View Responses](#)

I typically turn sounds off anyway and my iPhone is almost always on silent.

4/16/2013 9:17 PM [View Responses](#)

who cares about color?

9. Are there any other factors that matter to you when downloading a game?

The biggest factor out of these responses was cost; most people asked wanted free games. This makes sense because the games mentioned in the previous responses were generally free games that appear in the top charts for the games category.

10. Any additional comments?

Only comment here that made an impact was iPhones need to be more developer friendly and reduce restrictions while making a massive update to the platform to be more like Android.

Chapter 5

Conclusions

The purpose of the study was to determine the main causes of failure and success of mobile game applications in the Apple iPhone App Store. It also set out to make a list of factors for App designers to use when creating a new game. These factors could be used to incorporate into a successful game that a majority of iPhone users like. Success in this case was not defined monetarily, but by whether or not the game had a consistent presence in the App Store's top charts for games. By being present in the top charts for a prolonged period of time, the game shows its staying power and popularity among users. Games that do not stay in the top charts for long are no a success because they only make it to the top for an odd reason like a name that stands out or an app icon that is attractive. A list like this could make it very simple to create a great game every time, but unfortunately it is not that easy. It was discovered that the game must appeal across multiple audiences, conquer the art of simplicity, and ultimately be unique, not just fill a list of requirements. There are a lot of duplicate games out there that do not succeed because they are exactly that, a copy. They have all the factors a successful game has minus being unique and because of that, it fails.

If there was any conclusion that stood out the most, it came from the survey where the factors of competing against other people, strategy involved, and rewards for success being the top 3 things users wanted to see in the game they were playing. The least important factors were sounds and name because people often play on silent and the name of the game can be something unusual and still be fun. This was good to see and

backed up the findings of previous research that people enjoy being able to interact with their friends, be challenged by the game and be rewarded for beating it. This list could be useful for a developer, but it does not go to the extent that a more specified study could go. If there were a study done on each individual game and all the details of the game could be researched, the results of that would be more valuable to future developers. As it stands, this research works as a good framework to start from for any developer looking to get into games and is looking for a guide to begin using. There are other guides out there, but a lot of different things are said in these guides with no real proven method of success.

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