An Exploration of the Lived Experiences of Mobile App Entrepreneurs in Relation to the Development of Their Mobile App Businesses

By

Adam Doucette

University of Prince Edward Island

A Thesis Submitted to
The University of Prince Edward Island, Charlottetown, PEI
In Partial Fulfillment of the Requirements for the Masters in Business Administration

April 2013 – Charlottetown, PEI

Advisor: Susan Graham
University of Prince Edward Island

Second Reader:
Don Wagner
University of Prince Edward Island
Permission to use Signature Project Report

Title of Signature Project: An Exploration of the Lived Experiences of Mobile App Entrepreneurs in Relation to the Development of Their Mobile App Businesses

Name of Author: Adam Doucette

Department: School of Business

Degree: Master of Business Administration Year: 2013

Name of Supervisor(s): Susan Graham

In presenting this signature project report in partial fulfilment of the requirements for a Master of Business Administration degree from the University of Prince Edward Island, the author has agreed that the Robertson Library, University of Prince Edward Island, may make this signature project freely available for inspection and gives permission to add an electronic version of the signature project to the Digital Repository at the University of Prince Edward Island. Moreover the author further agrees that permission for extensive copying of this signature project report for scholarly purposes may be granted by the professor or professors who supervised the author’s project work, or, in their absence, by the Dean of the School of Business. It is understood that any copying or publication or use of this signature project report or parts thereof for financial gain shall not be allowed without the author’s written permission. It is also understood that due recognition shall be given to the author and to the University of Prince Edward Island in any scholarly use which may be made of any material in the author’s report.

Address:
UPEI School of Business
550 University Avenue
Charlottetown, PE C1A 4P3
Abstract

An Exploration of the Lived Experiences of Mobile App Entrepreneurs in Relation to the Development of Their Mobile App Businesses

By: Adam Doucette

The growth the mobile app industry has seen since its introduction in 2008 has been drastic. The industry saw revenues of over $8 billion in 2011 and is expected to have revenues of over $46 billion by 2016. Yet, with all the success the industry has experienced, limited research has been conducted regarding the entrepreneurs behind the apps that make the industry so successful. How have these entrepreneurs reached such success? What are their backgrounds? How do they manage their staff to reach such success so quickly? With an industry growing at such a rate, learning about the entrepreneurs behind the mobile apps will help develop an understanding of 1) the methods to grow a successful mobile app company; 2) the challenges surrounding the operation of a mobile app business; and 3) the advice the mobile app entrepreneurs would offer to those looking to enter the space. This research looks to learn from the lived experiences of fourteen mobile app entrepreneurs, to hear their stories, and to learn if common trends have been experienced among them.
Acknowledgements

To my thesis advisor Susan Graham, I am extremely grateful for your dedication, mentorship, coaching and support. Thank you for working with my schedule and location issues, and I appreciate your patience throughout this process.

To the interview participants who offered not only their time, but shared their personal stories and experiences that made this study possible. I hope you find this research helpful in the continued growth on this industry.

To Matt Gross, Founder of Mobile Monday Boston, thank you for assisting me in this research. I hope the findings of this study can support your organization in the future.

To my wife Rebecca, thank you for your endless support and patience throughout this process.
# Table of Contents

**ABSTRACT** ................................................................................................................................. 3

**CHAPTER 1 – INTRODUCTION** ................................................................................................. 7
  1.1 - INTRODUCTION .................................................................................................................. 7
  1.2 - BACKGROUND .................................................................................................................... 8
  1.3 - PROBLEM STATEMENT ...................................................................................................... 11
  1.4 - PURPOSE ........................................................................................................................... 11
  1.5 - NATURE OF STUDY ......................................................................................................... 11
  1.6 - RESEARCH QUESTIONS ..................................................................................................... 13
  1.7 - ASSUMPTIONS AND LIMITATIONS ................................................................................. 14
  1.8 - CONCLUSION ...................................................................................................................... 15

**CHAPTER 2 - LITERATURE REVIEW** ....................................................................................... 16
  2.1 - INTRO ............................................................................................................................... 16
  2.2 - STATISTICS ON THE MOBILE APP INDUSTRY ............................................................. 16
  2.3 - CATEGORIES OF MOBILE APPS ....................................................................................... 18
  2.4 - SOURCES OF REVENUE FOR MOBILE APPS ............................................................... 19
    2.4.1 - Pay-per-download ....................................................................................................... 20
    2.4.2 – In-app purchases / Freemium model ......................................................................... 20
    2.4.3 – Advertising ................................................................................................................ 20
  2.5 - MARKETING MOBILE APPS ............................................................................................. 22
    2.5.1 - Prior to launch ............................................................................................................. 22
    2.5.2 - Post Launch ................................................................................................................ 24
  2.6 - STARTUPS IN BOSTON ....................................................................................................... 25
    2.6.1 - Academia .................................................................................................................... 25
    2.6.2 - Venture Capital (VC) accessibility ............................................................................. 26
    2.6.3 - Angel and seed investors .......................................................................................... 26
  2.7 - THE FUTURE OF THE MOBILE APP INDUSTRY ............................................................. 27
  2.8 - GAPS IN THE LITERATURE ............................................................................................... 29
  2.9 - LITERATURE REVIEW CONCLUSION ........................................................................... 30

**CHAPTER 3 - METHODOLOGY** ............................................................................................... 31
  3.1 - METHODOLOGY IN THIS RESEARCH .............................................................................. 31
  3.2 - RESEARCH DESIGN ........................................................................................................... 31
  3.3 - STUDY POPULATION ......................................................................................................... 31
  3.4 - RESEARCH SAMPLE ......................................................................................................... 32
  3.5 – RECRUITING PARTICIPANTS ........................................................................................... 33
  3.6 - DATA COLLECTION ........................................................................................................... 33
  3.7 - DATA COLLECTION INSTRUMENT ................................................................................. 34
  3.8 - DATA ANALYSIS .............................................................................................................. 35
  3.9 – CONCLUSION ...................................................................................................................... 35

**CHAPTER 4 – FINDINGS** ........................................................................................................... 36
  4.1 – FINDINGS INTRODUCTION ............................................................................................... 36
  4.2 - RESEARCH QUESTION ONE ............................................................................................. 37
  4.3 - RESEARCH QUESTION TWO ............................................................................................ 38
  4.4 - RESEARCH QUESTIONS THREE ....................................................................................... 42
  4.5 – RESEARCH QUESTION FOUR .......................................................................................... 45
  4.6 – CONCLUSION ...................................................................................................................... 48

**CHAPTER 5 – ANALYSIS AND CONCLUSION** ......................................................................... 49
### 5.1 – INTRODUCTION

5.2 – FINDINGS INTERPRETATION

5.3 – RESEARCH QUESTION ONE

5.4 – RESEARCH QUESTION TWO

5.5 – RESEARCH QUESTION THREE

5.6 – RESEARCH QUESTION FOUR

5.7 – STAKEHOLDERS AFFECTED

5.8 – FURTHER RESEARCH

5.9 – CONCLUSION

WORKS CITED

APPENDICES

APPENDIX 1 – EMAIL INVITATION TO PARTICIPATE IN THE STUDY

APPENDIX 2 – PARTICIPANT CONSENT FORM

APPENDIX 3 – INTERVIEW QUESTIONS

APPENDIX 4 – RESEARCH ETHICS BOARD APPROVAL
Chapter 1 – Introduction

1.1 - Introduction

The mobile application (app) market has experienced consistent growth since mobile consumers were first introduced to the idea of handheld internet access without being restricted to a location. When Apple first launched the App Store in July of 2008, 500 apps were available for download (Kane). In comparison, as of December of 2012 the Apple App Store had over 737,000 active apps available for download, in addition to more than 250,000 other apps that were published and are no longer available (App Store Metrics). Having reached such growth in a short time frame, these numbers only represent the Apple segment of the mobile app market. Combine these numbers with the success of Google’s Android products that achieved over 700,000 apps available for download by October of 2012, the growth experienced since 2008 has been large (Womack). With the increase of people and businesses trying to understand how to capitalize on the mobile app marketplace, the number of mobile apps will continue to increase (Tanoto).

As the number of mobile apps continues to increase, understanding the innovators and entrepreneurs behind the products is important. Questions arise surrounding who are the people behind the mobile apps and which businesses have grown because of mobile app development. With well over a million apps on the market at the end of 2012, this research focused on understanding the experiences of mobile app entrepreneurs with respect to starting and growing their businesses. The research may help deliver a better understanding of the entrepreneurs behind mobile apps.
1.2 - Background

Although the mobile app industry has been around since only 2008, it is important to understand the growth that has occurred. This section details the different industry competitors and their growth in the industry. In July of 2008, Apple opened their App Store with 500 available apps (Kane). A year earlier, Apple released the highly publicized iPhone. This new phone was the first entrance for Apple in the cellular marketplace and offered users the capability to browse the web, and connect iPhones to the user’s iTunes account, allowing the user the ability to download music and movies (Thomas). Steve Jobs, CEO of Apple at the time, announced at a press event in March 2008 the unveiling of the App Store, a new virtual store where iTunes users could purchase mobile apps developed by third-party app developers. This method of connecting third-party developers to iTunes users was a new form of doing business for Apple. Jobs explained that app developers would receive 70% of revenue from application sales, while Apple would retain the remaining 30% to cover the operations of running the App Store (Cohen).

When the App Store officially opened its virtual doors in July of 2008, iPhone users acquired 10 million mobile app downloads in the first weekend alone. By November 2008, the App Store had grown to offer more than 10,000 apps available for download. With Apple achieving such success came reaction from the major competitors in the mobile industry. By mid-October 2008, Research in Motion (RIM) entered the mobile app market announcing the opening of their own app store for Blackberry products. The very next day, Android -- an operating system run by Google, joined the mobile app market by creating its own app store called Android Market, with 50 apps
available for download. The year 2008 is considered the beginning of the mobile app marketplace (Bowling).

During 2009, the mobile app industry continued to grow. Apple reached 500 million app downloads by mid-January, 1 billion downloads by April, and 3 billion downloads by the end of December. In January 2009, RIM announced that it too would begin accepting app submissions from third-party developers and announced the store would be called BlackBerry App World. By the end of the year, RIM had approximately 3,500 apps available for download. In May 2009, Nokia entered the mobile app market having launched a version of an app store called the Ovi Store. Although having only 3,200 apps available by September 2009, users were incurring approximately 1 million downloads per day. Android Market grew rapidly having 2,300 mobile apps available in March, more than 10,000 in September, and closed out the calendar year of 2009 having reached 20,000 mobile apps available for download (Bowling).

The four major mobile app competitors continued to grow in 2010. Highlights for Android Market in 2010 consisted of having 80,000 apps available and reaching 1 billion downloads by August. The number of active Nokia users reached 140 million by October and the Ovi Store reached 3.5 million downloads per day by December 2010. RIM saw app downloads per day grow from 1 million in June to almost 2 million per day by December. Apple reached over 300,000 apps available by October and approached 10 billion downloads by the end of 2010 (Bowling).

During 2011, Android Market reached 200,000 apps available for download, achieved the 3 billionth download by May, and reached the 6 billionth download by August. In May, Nokia announced it would no longer use its Ovi brand and transitioned
to *Nokia Services* (Perez). With the new name, *Nokia* continued to achieve success reaching both 6 million downloads per day, 1.8 billion downloads by June, and grew from 50,000 apps available in April to over 83,000 apps in July. *RIM* began to compete with competitors in 2011 having downloads increase from 2 million downloads per day in February to over 3 million downloads per day in March, all through the 37,000 apps *RIM* offered. The *Apple App Store* reached 500,000 apps by May (Bowling) and achieved the 18 billionth download by October 2011 (Statista).

Statistics as of November 2012 saw *Apple* offered over 737,000 apps and have reached over 30 billion downloads (App Store Metrics). In March of 2012, *Google* rebranded the *Android Market* to the *Google Play Store* (Velazco), reached 20 billion app downloads, over 600,000 apps available, and accrued 1.5 billion downloads per month in June 2012 (Constine). As of July 2012, *RIM* offered over 90,000 apps; reached 3 billion app downloads, and achieved download rates of 2.5 million apps per day (Briden). Statistics for *Nokia* had over 120,000 apps available to its registered 120 million *Nokia Services* customers while achieving a download rate of 15 million downloads per day in July 2012 (Nokia Developer).

With the growth the mobile app industry has achieved from 2008 to 2012, there is limited research is available concerning the individuals behind these mobile app businesses. Who are the entrepreneurs behind the hundreds of thousands of mobile apps throughout the app stores? What are the proper businesses practices in operating a mobile app business? This research attempted to learn about mobile app entrepreneurs through the lived experiences of the mobile app entrepreneurs during the development of their businesses.
1.3 - Problem Statement
Revenues within the mobile app industry for 2011 were estimated 8.5 billion in 2011, and strategists expect continued growth in the years ahead with revenues expected to reach 46 billion by 2016 (Reisinger). Even with all the growth the industry has achieved, limited research has been conducted in regards to the entrepreneurs responsible for generating the apps for this industry. Understanding how and why mobile app entrepreneurs started their mobile app businesses and the strategies used to grow their businesses are important for this growing industry. As an industry that has grown so large and so quickly, the attraction for new entrants to enter the industry is high. With an understanding of what is needed and what should be avoided in the process of developing a mobile app business, new entrants to the industry can learn from the experiences that mobile app entrepreneurs have endured.

1.4 - Purpose
The purpose of this research is to learn from the experiences of mobile app entrepreneurs who have started mobile app businesses. The findings from the interviews conducted with mobile app entrepreneurs aimed to provide useful knowledge for future entrepreneurs by learning from the experiences of the study’s participants. These findings focus on both the achievement and errors in the opening and operating of a mobile app business, and insights for future entrepreneurs entering the industry.

1.5 - Nature of Study
This study was encompassed phenomenological research. Phenomenology examines a specific phenomenon through the lived experiences of individuals who are a part of that phenomenon (Van Manen). Phenomenological research was conducted in this study by interviewing entrepreneurs to learn about the experiences of starting mobile app
businesses. Phenomenological research enables the study of the experiences from the perspective of an individual, avoiding taken-for-granted assumptions and the usual ways of perceiving situations, and solely focuses on the experience of the individual (Lester). Phenomenological research was chosen for this study to capture the views of the mobile app entrepreneurs who have the experience of opening and operating a business in the mobile app industry.

To capture the experiences of mobile app entrepreneurs, the study was conducted by interviewing mobile app entrepreneurs from the greater Boston area. Interviews allowed participants to provide qualitative insights to their individual experiences of starting mobile app businesses. The researcher prepared questions regarding the mobile app entrepreneurs’ experiences of opening and operating a mobile app business.

To identify a potential sample of mobile app entrepreneurs to participate in the study, contact was made with Mobile Monday Boston, a not-for-organization that supports mobile app entrepreneurs through monthly meetups. The founder of Mobile Monday Boston provided the researcher with a list of members that participated in Mobile Monday Boston events over a past two-year covering 2011-2012. This list of approximately eighty businesses included advertising firms, investment firms, and mobile app entrepreneurs from across North America. The list was narrowed to companies who developed mobile apps or were in the process of mobile app development, and restricted the list to companies from the greater Boston area. The list was reduced to forty businesses that met the study criteria.

Firms from the list of potential participants were invited, via email, to participate in the research study. The individuals who had not responded to the original email were
sent follow-up emails requesting participation. Those individuals who did answer, agreeing to participate in the study, were scheduled a meeting time for either in person interviews or meetings via *Skype*.

The mobile app entrepreneurs who agreed to participate in the study were asked through interview questions to share their experience of starting their mobile app business. Interview questions focused on the participants’ backgrounds, motivations to enter the industry, the business models used in their mobile app business, and the participants’ opinions on future directions of the mobile app industry. For accuracy, interviews were recorded with audio equipment.

After completing the interviews, each participant’s answers were documented and the researcher attempted to identify patterns and common trends among participants’ experiences. Specifically, the researcher identified common situations faced by participants, how the situations were handled, and the results of the decisions made by interview participants. The summary of the interview findings is highlighted in chapter four.

1.6 – *Research questions*
A research question is a clear, focused, and concise question around the center of the topic being researched. Research questions assist the researcher by having a focused view on the topic being studied (Lipowski). The following research questions focused on the experiences of entrepreneurs in the opening and operation of mobile app businesses:

1. From the lived experiences of mobile app entrepreneurs, what were the backgrounds and motivating factors inspiring entry into the mobile app industry?
2. What were the shared experiences of mobile app entrepreneurs relating to opening and operating a mobile app business?

3. What are the key methods of conducting business that the mobile app entrepreneurs use to operate their businesses?

4. What do mobile app entrepreneurs envision for the future of the mobile app industry?

1.7 - Assumptions and limitations

Assumptions are the matters taken for granted in research; statements made by the researcher that certain elements of the research are understood to be true (Dusick). The following are the researcher’s assumptions to this study:

- Participants were truthful in the correspondence provided.
- Participants were the correct people in representing the mobile app businesses.
- The questions used in interviews were sufficient in capturing the relevant information about being an entrepreneur in the mobile app industry.

As is the case with many research projects, this study has limitations. Limitations in this study are the areas to which the researcher cannot control (Dusick). The following were the limitations for this study:

- The research was confined to the greater Boston area and may not be generalizable to other mobile app development communities.
- The research is limited to the number of people who participated in the study,
- The research is limited to the shared experiences of the mobile app entrepreneurs are conveyed by the entrepreneurs themselves and have not been verified through other means.
1.8 - Conclusion

The purpose of this research is to learn from the experiences of mobile app entrepreneurs in the greater Boston area. Through phenomenological techniques, the research seeks to identify common trends and patterns the entrepreneurs experienced in the opening and operating mobile app businesses. By identifying these experiences, this study intends to provide relevant information for aspiring mobile app entrepreneurs and to learn from the experiences of interview participants.
Chapter 2 - Literature Review

2.1 - Intro

The literature review is a necessary part to conducting a research study. The literature review provides the reader with knowledge about the focus of the study and informs the researcher of influential researchers and research groups within the industry (Randolph). The literature review for this research study draws attention to different elements in the mobile app industry. The literature review will focus on elements of management and business operations in mobile app entrepreneurship rather than the technical portion to building the products.

The majority of the research came from internet search engines such as Google. Although much of the sources in the literature review came from popular press sources, searches were also conducted using Google Scholar and Academic Source Elite (EBSCO) to access peer-reviewed journals. Key words in searches were conducted using terms such as “mobile app industry in Boston”, “mobile app entrepreneurship”, and “starting a mobile app business”. Internet searches related to the mobile app industry produced thousands of papers, articles, slideshows, webcasts, blogs, and books. Tailored searches using keywords relating to specific areas identified the sub-themes of the literature review to help narrow the search findings.

2.2 - Statistics on the mobile app industry

Before smartphones were so widespread, the thought of checking email without being restricted to a location or having a map on a mobile phone to provide directions was not an option. But in the existing consumer marketplace, these are examples of the advances made in the capabilities of handheld devices. These advances continue to attract new smartphone users to the industry, as the potential for more users continues to grow.
The mobile app industry provides many tools that help users live more efficiently. These added conveniences from the use smartphones are one of the main reasons why the industry has achieved such growth (Shore). Popular research firm Flurry Analytics released figures reporting the adoption iOS and Android products (cellular phones or tablets using Apple or Google products, platforms that represent 85% of the world’s handheld market), is ten times greater than the adoption of personal computers (PCs) in the 1990’s. The US market represents the greatest number of active iOS and Android users with 165 million as of August 2012 (640 million active users worldwide), with China following with 128 million users. The US leads this market with year-over-year the growth of 30 million users. In comparison, China grew by 100 million new users in 2011, a growth of over 400% (Reisinger).

In October of 2011, Apple announced sales of 250 million iOS devices to date (iPhones, iPads, and iPods). Shortly thereafter, Google followed by announcing there were 190 million active Android devices in use. Google has achieved success in the head to head battle with Apple, as the first iPhone was sold 16 months before any Android product came to market and have gained new activations per day of 500,000 compared to iOS at 367,000. Comparably, iOS has achieved their activations over only a few products (iPhone, iPad, iPhone), while Google offers their products over hundreds of Android-based products (McCracken).

Specifically looking at the smartphone market, the Google Android-based products lead in the US. As of August 2011, Google held 43% of the market share, with Apple having 28%. When compared to the tablet market, Apple is the leader with a 66% market share versus Android products with 27% (McCracken).
Chapter one provided detailed statistics about downloads attained and the number of apps available, and the following section will focus on revenues for the two industry leaders. Developers face the inevitable question of whether to create apps for iOS, Android, both, and why. According to Pipar Jaffray, a US investment-banking firm, Android developers earn just 7% of what iOS developers earn. In terms of numbers, the Apple App Store has earned about $4.9 billion in gross revenue for paid apps, while the Android Marketplace is estimated to have earned just $330 million. Apple is defeating Android in this area primarily because of Apple’s overwhelming success with paid apps compared to more free apps available for Android than iOS. Approximately 14% of Apple app downloads are paid-apps compared to only 1% for Android (Sahajwani).

2.3 - Categories of mobile apps

The following section focuses on the specific categories of mobile apps. When developers apply to have apps listed in the various app stores, developers are required to choose which category the app should be listed within. The app stores list apps through different categories to assist users discover apps within particular areas of interest. Therefore, the importance of choosing which category the app will be listed can play a role in the success of the app (Olson).

The most downloaded category of mobile apps is games, which represented approximately 18% of downloads during July of 2012. Entertainment and education apps are a distant second and third with fewer than 10% each. App statistics website 148apps.com, which provides analytics of the business side of the Apple App Store, released figures about the number of new mobile apps released during September 2012.
Of the 25,857 apps released in the *App Store*, 3,326 were games, representing 13% of all apps released (*App Store Metrics*).

One emerging mobile app category that has gained growth is photo and video sharing apps such as the popular *Instagram* app. *Flurry Analytics* published data regarding the categories of apps users downloaded over a six-month period from October 2011 to March 2012. Photo and video sharing apps grew by 89% over that period. Other growing categories were Music (72%), Productivity (66%), Social networking (54%), and Entertainment (40%). *Flurry* reported that over a nine-month span from June 2011 to March 2012, users of photo and video-sharing apps grew by 166% (Farago).

The majority of photo and video sharing apps have websites for users to access on PC rather than smartphone. Further statistics outlined the comparison of time users spent using these apps on smartphones compared to viewing the app’s website on PCs. Over a one year period from March 2011 to March 2012, viewing grew by 141% on smartphones compared to growth of 71% for PCs. Furthermore, in the final three months of the *Flurry* study, PC users time on such sites decreased by 10% from 472 minutes per month to 428 minutes. In comparison, viewings from mobile users went from 151 minutes to 231 minutes, a growth of 52% (Farago).

2.4 - Sources of revenue for mobile apps

Revenue generation for mobile apps is a topic that draws substantial attention because of the number of apps available for free to users. *Gartner Research* released statistics in 2011 that speculated that of the 45 billion downloads that will occur in 2012, more than 40 billion will be free downloads. With approximately 90% of downloads being free, many questions surround revenue sources (Lunden). This section examines
different sources of revenue in the mobile application marketplace and discusses trends for the future ahead.

2.4.1 - Pay-per-download

One source of revenue generation for mobile apps is pay-per-download apps, which are apps that require users to pay for the app each time the app is downloaded. The pay-per-download segment makes up only a small portion overall of total downloads. Of the five billion pay-per-download apps occurring in 2012, 87.5% will cost between $0.99 and $2.99. According to Gartner Research, the $0.99 to $2.99 price segment will continue to grow and is expected to make up 96% of all pay-per-downloads by 2016 (Lunden).

2.4.2 – In-app purchases / Freemium model

One revenue stream that has gained growth in 2012 is in-app purchases, as this segment represents 10% of all virtual store revenues (Lunden). This method of revenue is also referred to as the freemium model, where a free version of the app is available, but the user has option to purchase a more advanced version within the app. The more advanced version of the app may offer less or no advertisements, or may be the same app offering more levels and/or settings. This type of service allows the user to try the product for free and if enjoyed, the user can purchase the more advanced version. The Freemium model allows the opportunity to gain return revenue from the same customer if the developer offers further editions of the same app. Gartner Research expects in-app purchases will account for 41% of mobile app revenues by 2016 (Lunden).

2.4.3 – Advertising

Another popular form of income generation comes from the sale of advertising space on the mobile app. Similar to selling advertisements on radio and television, the
more potential consumers who can view the ads, the better. Therefore, mobile apps that obtain many downloads offer a high potential of views for mobile advertisements (Fazil).

Options for what type of advertising is most appropriate can range given the category of app and the demographic of users represented. Many choose to work with “long-tail ad networks” that act as a “middle-man” to connect possible advertisers to the app development firm. Long-tail ad networks have many clients and attempt to find the right type of advertisement for the app, and are easy to facilitate. A drawback to long-tail ad networks is they are often the least lucrative of advertising revenue, as income relies on the number of impressions incurred. Without obtaining high download numbers, this option does not provide a substantial return (Fazil).

High quality ad networks provide a more enhanced advertisement built specifically for the app. This requires the ad to be built into the app with richer content, like a pop-up game or a video that acts as the advertisement. The negative to this type of advertisements is the extensive back-end work needed from the development firm. Advertisers must feel their product aligns well with the app to make such an investment (Fazil).

Whether one revenue source is chosen over another, mobile app developers should conduct research to understand which types best suits the app’s user. Understanding whom the customer is and what competitors are doing is important in defining how the company will most effectively produce revenue. Using multiple strategies may be the right fit, but what is most important is that the revenue strategy does not alter the apps purpose in order to build profits. Users who are forced to pay more
attention to advertisements rather than use the app for its actual purpose could be deterred from use based on annoyance (Manoogian).

2.5 - Marketing mobile apps

A strong plan to market mobile apps is important in the mobile application development industry. Mobile app entrepreneurs work diligently to create unique and productive products, but without a strong and effective marketing plan in place the app will not reach its possible consumer-base. Having a two-prong approach consisting of marketing done both prior to launch and post-launch is essential and can result in either the success or failure of the app. This section outlines specific marketing areas that should be addressed in both prior and post-launch of the app (Sefferman).

2.5.1 - Prior to launch

Selecting keywords: Keywords are important as users look for apps within a certain search criteria. If a developer builds an app for a sudoku game, having keywords like “sudoku” or “sudoku game” is important. Various tools are available online that help research the metrics of keyword searches, which allow users to find apps easier (Sefferman).

Name: A strong name is helpful for users to find apps. A name that describes the app’s service helps users find the product. Ensuring competitors do not use a similar name to prevent infringement on any trademarks is important (Sefferman).

Choosing the right app category: When developers apply to list a product in an app store, the developers are asked in which category the app should be listed. Depending on the category where the app is found, the amount of exposure to new users can differ. Users pay strong attention to the various app store charts to know what is popular. Being situated in a category like Social Media with large competitors such as Facebook,
*Instagram*, and *Twitter* make it difficult to capture exposure. If the app can fit in to a different category with a possibility to higher chart exposure, the better the possibility that users will find the app (Sefferman).

**Competitor research:** Understanding who are the competitors within the app category is important in order to stay connected within the category. Searches using similar keywords will help recognize who is the competition. Competitor reviews and star-ratings will help learn about others players in the category and help understand why users choose to download the competitors’ apps (Sefferman).

**Attractive Icon:** An eye-catching icon is important for mobile app developers in order to attract users to the app. Having a stylish and eye-catching icon that conveys the app’s purpose will draw the user’s attention. *Apple* will not feature an app (a strong driver of downloads), unless *Apple* believe the icon is well defined and fits with the overall *Apple* brand look and feel (Sefferman).

**Providing screenshots:** Informative screenshots that showcase the ability of the app can help turn a visitor into a downloader. Screenshots allow the opportunity to inform users of the app’s features and abilities (Sefferman).

**Website:** Although many apps are primarily for mobile use, a website to house content on the app can be an informational resource for users. Websites can be the core destination to house marketing efforts like *Youtube* videos, social media connections, and core-content about the upcoming product (Yarmosh).

**Attractive videos:** Videos are an opportunity to act as a teaser for an upcoming product. Videos can share information about what is soon to be made available for the app (Ganguly).
**Word of mouth:** Word of mouth can create a buzz by sharing details of the app with friends and peers. Using friends as beta-testers can help work out kinks and these friends will be more likely to promote the app’s launch and assist in the discovery of early adopters (Ganguly).

**2.5.2 - Post Launch**

*Social media:* Social media is a great tool to stay connected with customers. Social networking tools like *Facebook, Twitter, Instagram* and *Youtube* allow mobile apps businesses to share new data, acquire feedback, explain products, and provide an opportunity to remind users of the product. Staying connected with these tools with timed posts and constant updates is very important in this marketplace (Ganguly).

*Analytics tools:* Many analytical tools are available to monitor an app’s performance and to stay current with competitors. Analytics tools provide statistics that help understand performance and the effectiveness of various campaigns and help learn about the behaviors of the app’s users. (Sefferman).

*Feature on review sites:* Positive reviews and publicity from blogs and review sites can increase downloads heavily. Mobile app development firms need to reach out to review sites and forums to influence the reviewers to test (and hopefully review) the app (Sefferman).

*App rating and review:* An app’s ranking in searches and chart rankings relies heavily on positive ratings and user feedback and will help grow the app. Mobile app developers use different strategies to encourage users to provide feedback such as waiting until the user has spent sufficient time using the app (showing the user enjoys the app) to ask to provide feedback. Another strategy is to offer a form of virtual currency to use within the app if the user was to provide feedback (Sefferman).
**Community involvement:** Mobile app entrepreneurs continue to learn about their industry by staying connected through blogs, forums, journals and industry websites. Mobile app entrepreneurs should gladly accept invitations to speak to groups or become guest contributors to these forms of popular press as these opportunities can uncover new users and offer the chance to hear user feedback (Sefferman).

**Ad-tracking software:** Ad-tracking software tools showcase the number of downloads received based upon advertisements placed. This software helps track where users are downloading apps and can help refine future marketing campaigns (Sefferman).

A structured and thought-out marketing plan for mobile apps is critical in not only gaining new users, but to retain and encourage users to continue using the app. New strategies will be constantly entering the space and it is important to stay connected to these strategies. Although an app may be built with skilled developers having attractive features and graphics, the marketing plan is needed in order to have the app reach its potential customer base.

2.6 - Startups in Boston

The startup environment in Massachusetts is one of the highest grossing areas across the USA. While the Silicon Valley and San Francisco are known for hosting the biggest players in the technology startup market such as Apple, Google, and Facebook, the *National Venture Capital Association* for technology startups ranks Boston as the second best city for technology startups in North America. This section outlines some of the key reasons why Boston has reached such a level of success in the startup community (Graham).

2.6.1 - Academia
The quality of educated individuals coming out of the greater Boston area region is top caliber. Boston houses some of the country’s best-recognized post-secondary institutions, and is ranked as the smartest city in North America (Cohen). The Massachusetts Institute of Technology (MIT), a popular university in Cambridge, is known as a “factory of innovation” having graduates that have founded over 33,000 companies, employing over 3 million people, and generating annual sales over $2 trillion (Frick). Within a couple of miles of MIT is Harvard, one of the world’s most respected education institutions, and the birthplace of Facebook. In total, Boston houses 74 universities with over 350,000 students (Myers).

2.6.2 - Venture Capital (VC) accessibility

The National Venture Capital Association recently ranked Boston as the 2nd best US city for technology startups, with over 700 startups in 2011 (Graham). During 2011, 285 companies accessed over $2.77 billion in venture capital funding, trailing only San Francisco in funding received in the US (Rousseau). In 2008, VC investment per capita in Boston led the country at $457/person, ahead of California at $388/person and far ahead of New York at $67/person (Frick).

The amount of VC firms in the greater Boston area is large given Boston’s active VC community. Social mixers and presentations inviting entrepreneurs to meet VCs are regular occurrences. Informational VC websites such as Greenhorn and Venture Fizz provide constant details about such events, attempting to lure in new entrepreneurs that VCs can connect with (Frick).

2.6.3 - Angel and seed investors

Besides large VC firms with attractive campaigns and events to lure in startup companies, the Angel scene (also known as private investors), in Boston is also very
active. With Boston having so many financially successful people due to the success of so many companies in the area, many of these successful people want to assist (and gain) from startups needing investment. Startups look for Angel investors not only for the financial assistance, but the investors often act as advisors to startups helping the entrepreneurs through the difficulties of starting a new business.

No one description or stereotype can be used to describe and identify of these private investors. A 2010 article for Boston.com described some of the city’s most prominent Angel investors, and surprisingly some were management in large VC firms. Rich Miner, a managing partner at Google Ventures, one of Boston’s most active VC firms, described his ability to invest outside his firm. Miner stated if a deal he likes has been pitched to Google Ventures and the group decides to pass on investing, partners are allowed to make angel investments of their own. The Boston.com article also discussed that investments from athletes and celebrities are regular occurrences as well in the Boston area (Kirsner).

Angel investment in the USA is increasing in the recovery of a poor economy of past years. The first half of 2012 saw an increase of 3.1% in Angel investment compared to the same period of 2011 with over $9.2 billion invested (Farrell). The Boston Angel community makes it easy for individuals who want to become Angels, with associations in place to connect and meet with entrepreneurs and hold regular events to help educate about becoming an Angel investor.

2.7 - The future of the mobile app industry

The mobile industry has various options to consider in moving the industry forward. Given the growth the mobile app industry has experienced, evolvement
throughout the industry is most probable. Reports have indicated the mobile app industry had an estimate revenues of over of $8 billion in 2011 and is expected to increase to 46 billion in value by 2016 (Reisinger). This section focuses on some of the areas where mobile app development is moving towards in the future.

Bob Sutor, Vice President of Mobile at IBM and a highly recognized blogger, provided his insights in a guest piece for Venture Beat magazine. His opinion is that compounding apps will start to work together to deliver better services for users in the future. Sutor explained that mobile apps would become smarter and more advanced by thinking ahead for users. An example of this is someone making a social media post about a pleasant experience at a restaurant. Compounding apps will have the ability to make suggestions to users based upon their location and past online experiences. For example, consider the user is at a large airport and has a long flight departing in thirty minutes. Compounding apps have the ability to see the restaurants the user has liked in the past based upon the user’s online presence (Facebook, Twitter, YELP). With another app showing the user has a flight is departing in 30 minutes, compounding app could make suggestions for restaurants nearby given the time sensitivity to departure with the long flight ahead (Sutor).

Another area receiving attention in the mobile industry is Near-Field Communication (NFC). NFC is a chip in mobile phones that allows secure data transfer by tapping a device onto another NFC-enabled receiver, and could be used in place of a debit or credit card. Popular media attention regarding this technology specifically focuses on which mobile phone developer will be the first to embrace this technology and install the NFC chip. Questions surrounding this technology often relate to security
issues. Many opinion pieces suggest this technology could be utilized for smaller transactions (i.e. coffeeshops), but should be limited to this type of purchase. If the user is required to enter a pin code, the question of convenience is raised (Hill).

Mobile apps such as LevelUp and Square are presently available that offer a similar service, but require users to signup to the app and to connect the user’s banking information to the app. The user can pay for products using the app by having the cashier scan a bar code on the user’s smartphone using another smartphone at the retail establishment. Although there is excitement around apps such as these, membership registrations to these apps has been slow. Many consumers and app users are interested in seeing what is needed to make NFC and these types of transactions gain popularity in the future (Hill).

A research study conducted in the summer of 2012 by research firm IDC combined with Appcelerator, surveyed more than 5,500 mobile app developers to seek insights on the future of the mobile industry. Mobile developers were asked to offer opinion on different areas they see the industry trending towards, common responses suggested moving outside the traditional mobile space. 84% of respondents expect mobile app development will move to building apps for televisions by 2015, while 74% believe mobile app development for automobiles will exist by the same time (Ouimet).

2.8 – Gaps in the Literature
There is minimal research regarding studies conducted on the business practices of mobile app entrepreneurs in this industry. Although many articles have been published interviewing mobile app entrepreneurs concerning their businesses, the researcher could not locate any comparative studies or articles regarding mobile app entrepreneurs.
Research regarding backgrounds before entering the industry and methods of operating mobile app businesses would help create evidence on how the entrepreneurs conduct their businesses and provide guidance for future entrepreneurs entering the industry.

2.9 - Conclusion
Based upon the information in the literature review, the research and preparation mobile app developers need to conduct before considering launching an app is extensive. The purpose of this literature review is to provide some background on the mobile app industry in the greater Boston area. This literature helped the researcher further understand the mobile app industry and helped refine the research questions explored in this study.
Chapter 3 - Methodology

3.1 - Methodology in this research

Different types of research methodology consist of experiments, surveys, interviews, case studies, and observation (Alzheimer’s Europe). Depending on whether the research is targeting qualitative or quantitative results helps determine which type of research to utilize. The study aimed to learn from the lived experiences of mobile app entrepreneurs in the development of their businesses, and to achieve this the study used a qualitative approach through interviews with the mobile app entrepreneurs.

This specific type of qualitative research used in the study is called phenomenological research. Phenomenological research involves learning from others’ subjective experiences. The purpose of this research is to learn from the experiences of mobile app entrepreneurs who have started mobile app businesses. Data for the study was collected through interviews with mobile app entrepreneurs. Upon completion of the interviews, responses from participants were coded and analyzed to discover if common themes or patterns arose from the different mobile app entrepreneurs.

3.2 - Research Design

The research design for this study is made up of interviews with mobile app entrepreneurs from the greater Boston area. This study was conducted with a qualitative approach through interviews with 14 mobile app entrepreneurs. Interviews allowed participants to share their experiences of opening and operating mobile app businesses.

3.3 - Study population

The mobile app industry is connected to the information technology (IT) industry as many developers come from backgrounds in programming, design, and computer engineering (Albright). The mobile app industry is not regulated and developers do not
need a certain level of education or experience, nor are there licensing regulations. The participants in this study could have type of any backgrounds such as web development, computer architecture, or sales. Therefore, this study’s population is large given membership accessibility to the mobile app development industry. To narrow the population specifically to the mobile app industry, the researcher targeted mobile app developers in the greater Boston area.

In order to obtain a narrowed population specifically to the mobile app industry, contact was made with *Mobile Monday Boston*, a meetup group which meets monthly offering support and guidance to those interested in the mobile app industry. Organizers from this organization agreed to provide a list of eighty mobile app development firms that *Mobile Monday Boston* have been in contact during 2011 and 2012. The researcher realized the list provided by *Mobile Monday Boston* does not include all mobile app developers in the greater Boston area, but was a good connection to the industry.

3.4 - Research sample

No known registry of mobile app entrepreneurs in Boston exists, as the profession is not regulated. A mobile app developer could work with a firm that products apps for consumers, or could be an individual who performs the work part-time while maintaining another career. Because no registry of mobile app entrepreneurs exists, contact was made with *Mobile Monday Boston*, to assist in identifying a potential sample to satisfy the study objectives.

As previously stated, *Mobile Monday Boston* provided the researcher a list of eighty firms the meetup group has worked with during 2011 and 2012. Firms contacted Mobile Monday to either share information about products, to receive support, or to
network with other mobile app entrepreneurs in the industry. The list provided by Mobile Monday Boston included short summaries of the concept of the app(s) the firm developed, as well as where the firm is located.

The researcher filtered the list to include only firms that were located in the greater Boston area (firms from all of North America were on the list). The list also showcased marketing agencies, software and hardware engineering firms, and venture capital firms. The researcher narrowed the list to firms that had or were in the process of developing mobile apps. This narrowed list of forty firms created the potential sample group.

3.5 – Recruiting Participants

To recruit participants for the study, an email was sent by the researcher to the mobile app entrepreneurs asking for voluntary participation in a graduate research study. The purpose of this study was explained in the email: to learn from the experiences of mobile app entrepreneurs who have started mobile app businesses. The mobile app entrepreneur was invited to take part in an interview that would take approximately thirty minutes. The interview would focus on answering questions about their lived experiences in starting a mobile app business and what they have endured through their growth. See Appendix 1 to view the email invitation.

3.6 - Data collection

Data was collected from the research sample provided by Mobile Monday Boston through the interviews. Of the fourteen entrepreneurs who agreed to participate in the research, four asked to be interviewed via Skype while face-to-face meetings were scheduled with the other ten participants. The participants that preferred to be interviewed
using Skype were emailed a copy of the Participant Consent Form and asked to return a scanned signed copy to the researcher. The participants who were interviewed in person were asked to sign the Participant Consent Form prior to the commencement of the interview (see Appendix 2 to view the Participant Consent Form). All participants were reminded of the anonymity of the interviews and the option to refuse to answer any question should the participant feel uncomfortable.

Before the interviews began, participants were asked for permission to audio record the interview for the purpose of accuracy. All participants agreed to recording. After completion of the interviews, the recordings were transferred to an external hard drive to ensure security.

The process for collecting data involved participants answering sixteen questions that were developed to address the study’s purpose. The same questions were asked to all participants, having participants share experiences of opening and operating mobile app businesses. Participants discussed past careers, staff, challenges faced, and strategies used in the experience of being a mobile app entrepreneur. Appendix 3 shows the questions asked to participants.

3.7 - Data collection instrument

The data collected for this study was conducted through interviews. Interview questions allowed participants to share experiences of opening and operating a mobile app business. Specific areas the questions targeted were the motivations for entering the industry, how the business operates both as a whole and how the individual operates as an entrepreneur, and future direction of the participants’ business and the industry as a whole. The interview questions were developed by the researcher from the research found
in the literature review, and all interview questions were developed to effectively answer the study’s research questions. All interview questions were approved by the University of Prince Edward Island Research Ethic Board and the approval certificate can be seen in Appendix 4.

3.8 - Data analysis

Upon completion of the participant interviews, responses were inputted into an excel spreadsheet by the researcher. Each question’s responses were analyzed to understand if any common themes and patterns arose. Discovering common themes was the aim of this research to understand if similar strategies and hardships were faced among the mobile app entrepreneurs interviewed.

Throughout the data analysis stage, names of participants were not used in the recording of results in order to maintain participant confidentiality. To share interview data without using participant names, a coding system was used. The coding system used letters and numbers to represent participants who were interviewed (ie. participants were numbered P1, P2, P3). A similar coding system was used if the participant shared company names, competitors, and products.

3.9 – Conclusion

Through the steps detailed in the methodology section, the researcher was able to uncover findings based upon the experiences shared by interview participants. Interviews with 14 mobile app entrepreneurs were conducted in the Spring of 2013. The following chapter explores the findings from participant interviews that help answer the study’s research questions.
Chapter 4 – Findings

4.1 – Findings Introduction

To fulfill the study purpose, interviews were conducted with fourteen mobile app entrepreneurs from the greater Boston area. Of the fourteen interviews, ten were in person, and four were conducted over Skype. Interviews were conducted over a three-week period in early 2013.

The interview sample was comprised of twelve males and two females. The ages of interview participants ranged as one was in their early twenties, six were late twenties/early thirties, six were late thirties/earlyforties, and one participant was in the above mid-forties category. All interview participants were mobile app entrepreneurs that operated their businesses in the greater Boston area.

The results section of the this paper is divided in four sections to address the following research questions:

1. From the lived experiences of mobile app entrepreneurs, what were the backgrounds and motivating factors that inspired entry into the mobile app industry?
2. What were the shared experiences of mobile app entrepreneurs relating to opening and operating a mobile app business?
3. What are the key methods of conducting business that the mobile app entrepreneurs use to operate their businesses?
4. What do mobile app entrepreneurs envision for the future of the mobile app industry?

For each of the research questions, different interview questions were asked to participants to provide rich content to help answer the research questions. In this section,
the interview questions representing each research question will be addressed by reporting the responses of the interview sample.

4.2 - Research Question One

The first research question sought to learn about the backgrounds and motivating factors that inspired the interview participant’s entry into the mobile app industry. This topic was relevant to the study to understand if there were prior experiences or skills in prior career endeavors among the participants before becoming mobile app entrepreneurs. This was also the area to learn about each mobile app entrepreneur’s motivation for entering the industry.

To address this research question, participants were asked to share how they entered the mobile app industry and why they decided to start open a business. Responses for this question had the majority of participants having a past connection in the IT industry. Five participants were former CEO’s in IT related businesses and moved to mobile app businesses due to the rapid growth of the industry. Six participants had worked in IT jobs in the past and with the mobile app industry growing, felt it was a good time to enter the industry as entrepreneurs. Two of these six opened the business as their past companies had closed and being surrounded by newly unemployed talent, moved fast to recruit this talent and start the new business. Five participants who were in IT in the past talked about the growth of the internet in the nineties and felt the mobile app industry was a similar wave and did not want to miss this opportunity. Besides those with connections to IT, two other participants started businesses after completing university and felt they had confidence in the knowledge of the industry growing and had the skills
to succeed in this industry. The remaining entrepreneur had no IT background, but saw an opportunity and left a sales position and to start a mobile app company.

4.3 - Research Question Two

The second research question sought to identify the shared experiences of mobile app entrepreneurs relating to opening and operating a mobile app business. The answer to this research question, participants were asked six interview questions. The six interview questions focused around the specifics of how the participant’s mobile app businesses operate.

The second interview question asked participants about the size of staff working at the firm and where staff lived. As figure 1 shows, only two companies had a staff of 20 or more employees. The remaining breakdown was two participants with staff between 15-20 people, one staff of 10-15 people, three participants with between 5-9 employees, five participant staff’s of 2-5 employees, and one participant operating the company one their own. Of the fourteen participants interviewed, only two app businesses had staff living outside the greater Boston area.
The third interview question asked participants to share how long the companies had been developing mobile apps, and the number of mobile apps developed. Responses regarding the number of years each company had been in operation ranged from five companies being less than a year old, four companies between 1-2 years old, four companies between 3-4 years old, and one company of more than 4 years old. Percentages representing the amount of companies and how long the companies have been in operation can be found in Figure 2.

Figure 2 - Age of Companies

Responses regarding the number of apps developed saw two companies had developed over 40 apps (these were the only of the companies who built apps for external clients). The remaining twelve participant companies had a breakdown of six companies saying this was their first app developed, one company had built 5 apps, three companies had built 3 apps, and the remaining two companies had built 2 apps.

The fourth interview question asked participants about the categories of mobile apps their firms developed and whether the firm would be interested in developing
mobile apps for other categories. Responses for this question had only two participants say the firms create apps for various categories. The remaining participants gave the following responses:

- 4 - games
- 2 - lifestyle
- 1 - productivity
- 1 - navigation
- 1 – education
- 1 - social networking
- 1 – music
- 1 - health and fitness

The fifth interview question asked participants to explain the revenue model used in the mobile app business. Of the fourteen participants interviews, two participants were development shops that create apps for external clients (one develops apps for both external clients and their own firm). Both of the development shops are fee-for-service and have no interest in receiving equity for building apps for clients. Of the participants who developed mobile apps for ownership, figure 2 shows how these thirteen participant companies earn revenue.

Firms that generate revenue by data is defined as revenue created based on the content of consumer behaviors, and is then sold to retailers. This is a new area for income generation in the mobile app industry, and the researcher found no prior research conducted in both academic research and popular press. No participants said their firm would operate solely based on income from advertising. Answers for this question were consistent as five firms gained revenue through a freemium model, four firms used a combination of multiple revenue models, two firms sold the data of user behaviors, and two firms gain revenue by pay-per-download. The breakdown of companies earning the different types of revenue can be found in Figure 3.
Interview question six asked participants whether their firm develops for iOS, Android or both. Responses for this question had only four participants develop for both platforms. Six participants are currently iOS developers and described the want to perfect the product in iOS first, and will then move on to developing for Android products. Four participants said they solely plan on developing for iOS. Zero respondents said their firms develop solely for Android.

Interview question seven asked participants whether the firm has or would develop apps projects for external clients and if yes, compare this experience to developing for an in-house project. As previously stated, two of the fourteen mobile app entrepreneurs operated development shops and were in the business of developing apps for external clients. These participants were not asked this question. Of the other twelve participants, all twelve said this is not the direction they want to move their businesses. Only two of the twelve have entertained requests to take on external projects, but said no. The remainder felt external project would take focus away from the firm’s own products.
4.4 - Research Questions Three

Research question three focused on the key methods of conducting business that the mobile app entrepreneurs use to operate their businesses. To answer this question, six interview questions were asked to participants.

The eighth interview question asked participants how they keep up to date with competitors given the rapid changes in the mobile app industry. The most common response came from six participants who felt every app in the app store was a competitor. These six explained that while monitoring the competition is important, many other priorities are ahead of this. Three participants said watching blogs, tech website, and magazines are all important to stay current with the industry and competitors. Three participants felt their apps were in very niche areas, and constantly watched specific competitor apps to monitor any changes. Two participants relied heavily on social media to hear how users are feeling about the products, and often brought those results to team meetings.

Interview question nine asked participants to describe the biggest challenge faced throughout the development of their mobile app business. The most common response came from seven participants saying getting found in the app store was the biggest difficulty. With so much competition coming through the app stores each month, getting users to find the product and acquiring new users is challenging. Three participants talked about hiring quality staff being the biggest challenge, as larger competition in the IT industry that offer attractive salaries and benefits are difficult to compete against. Two participants talked about the time commitment of running a small-scale company and how much it can wear on a person. One participant felt the pressures of being a new CEO extremely stressful and challenging in the decision-making responsibilities compared to
past work experiences. The final participant felt gaining investment as the biggest challenge in operating a mobile app business as so many other companies, app related or not, are too looking for startup investment.

The tenth interview question asked participants if there had been a best lesson learned so far in relation to operating a mobile app business, and if so were asked share the details. Two participants could not pinpoint a particular best lesson, but were emphatic that they had learned plenty in their experience in the industry so far. Three participants emphasized how quickly funding can run out. Many costs need to be attended to and having a tight budget with timelines is a necessity. Two participants discussed the importance of treating your staff incredible and developing a comfortable work culture. With a high demand for talent in the tech industry, staff was constantly being recruited and treating staff respectfully is important. Two participants talked about the use of beta-testers for the product. Getting people to try out the product, provide honest feedback, and listening and acting on the feedback was crucial. Two participants discussed the importance of building a perfect product first, then looking to grow. Working out the kinks early in the beginning phases and focusing on the details is so important. One participant discussed how app users are not loyal and have very small attention spans. Improvements to the app need to be constant in order to retain users. One participant talked about how the industry is always changing. The participant emphasized never being fully able to understand the industry, as changes happen daily. The final participant discussed the need of a strong marketing plan. Even with an incredible product, a plan needs to be in place for users to find the product.
Interview question eleven asked participants if they have received any support or mentorship and if so, what affect did it have on their experience as an entrepreneur. Two interviews were running out of time and this question was skipped. Two participants said they had actual CEO coaches and both praised the value of this assistance. Seven participants shared that although they do not have CEO coaches, investors provide value by acting as mentors. Two participants spoke highly about peers within the industry, praising on the industry’s members for being approachable and willing to help. The final participant said a former professor is used in a mentorship role.

Interview question twelve asked thirteen participants (time was low on another interview and this question was skipped), to share one characteristic or skill in themselves which has been the most important in development of the mobile app business and why. A similar response was given from six participants who felt their personal drive (passion, motivation, perseverance) was their best skill in leading the company. Three participants talked about industry knowledge and IT abilities as being most important. Two participants discussed their marketing skills and the ability to connect with users as their best strength. The remaining two participants felt their leadership skills have been the most valuable skill in leading the company.

Interview question thirteen asked participants to compare themselves now as the present CEO/Owner/Founder to the one they were in the beginning phases of the business and what are the differences. Four participants did not offer input saying the time spent being CEO of the business has been too short to offer valid content to this question. Five participants felt with the experience gained, they now hold more data and knowledge to formulate decisions, and are doing so with improved confidence. Two participants shared
the experiences being too naïve with budgeting as the biggest difference. Two participants talked about the way they work and interact with their teams as the biggest difference, specifically in delegating more tasks and in sharing more information with staff. One participant felt an improved knowledge of the major platforms and understanding how to deal with the app stores as a greatest strength the participant did not have in the past.

4.5 – Research Question Four

Research question four focused on what the mobile app entrepreneurs envision for the future of the mobile app industry. Three questions were asked to participants to give input on future directions of the participants’ businesses, the mobile app industry, and any advice the participants have for the next mobile app entrepreneurs who enter the industry.

Interview question fourteen asked participants to share what to expect in the future for their companies over the next 12-24 months. Of the 13 participants who answered this question (one interview was running short on time), seven participants emphasized a similar message to continue to seek user feedback to improve the product, and then looking to grow. Developing a high quality product based upon user feedback is seen as a necessary step before trying to grow the product. Two participants talked about changing the way they are presently doing business, specifically to simplify their current business methods and to focus on higher quality products compared to a higher quantity of products. Two participants explained the need to gain more funding in order to grow the firm as without funding, the business would not have the needed resources to grow. One participant talked about continuing to follow a similar process, growing more products as they have been doing. Lastly, one participant felt the company was having
trouble staying competitive with the app market being too saturated and does not have the capital to keep up and expects to close the company in the near future.

Interview question fifteen asked participants to give their perspectives on any changes they see occurring in this industry over the next five years. Twelve participants felt the mobile app industry would continue to expand in the future ahead, with seven participants expecting continued growth and more players to enter the industry. Two participants felt more hardware products will be brought in to compliment mobile apps. Two participants talked about mobile apps replacing common day-to-day handheld devices (ie. keys, garage door opener, remotes). One participant emphasized the growth of mobile wallets and the ability to pay for products with mobile devices.

The other two participants felt the industry growth would diminish in the near future. One participant felt a reduction in investors would occur due to so many more competitors in the app market fighting for the same user’s money. The other participant felt the developers’ frustration of being at the mercy of Apple and Android’s regulations would eventually move these developers to different markets.

Interview question sixteen asked participants what advice they would offer to someone looking to start his or her own mobile app development company. Responses for this question varied and are best described through the following quotes of interview participants:

- “Secure income before you quit your day job; make a plan before diving right in.”
- “Just do it. If you are passionate about an opportunity, make it happen. Make sure you have the right people involved that can see the project through – like a cofounder or staff who can play a major part.”
• “Failure is an option. If there is not some amount of risk, you are probably not trying hard enough. You need to be comfortable with some sort of failure, because it is going to happen in some way (fail some days, fail overall).”

• “Get team members that you can get along with.”

• “There is a lot of information out there, look for the information relating to your product. There is too much out there to know everything.”

• “Have a big idea and vision, but deliver only a tiny piece to beta testers to get feedback and iterate from that. Learn from your feedback, it’s unbelievable how much you can gain.”

• “Aim small and keep the company small. Be realistic… this is not the richest industry.”

• “Reach out to the network and industry players, there is a lot of camaraderie opportunities.”

• “This is an incredibly crowded space, so you need to find an unmet need. Everything needs to be done right, no detail is too small.”

• “Build a good quality product, and do lots and lots of testing!”

• “Consider whether there is real value in having an app. Validate that it is useful before sinking too much time and money.”

• “Get in and try it out. Get the experience. Even fails are valuable experience, you will learn from fails.”

• “Start with the team. Pick team members who have a lot to offer the company. Also if you fail, learn from it and try again.”
• “Pick an area you enjoy. Don't build to a perceived market need, you need to have a passion about it.”

4.6 – Conclusion

Through interviews with the 14 participants, the mobile app entrepreneurs provided valuable content through sharing stories of their lived experiences of opening and operating a mobile app business. The participants were honest and open in sharing stories of the difficulties they have faced, the different management styles, and opinions on the future. The following chapter showcases the similarities among responses and details the areas that require further research based upon the feedback from the mobile app entrepreneurs.
Chapter 5 – Analysis and Conclusion

5.1 – Introduction

This chapter looks to answer each research by analyzing each research question’s respective interview questions to look to see if any common trends were discovered. Based upon the conclusions of the research questions, the researcher identifies the stakeholders who are affected by this study and areas where improvement can be made. Lastly the researcher outlines possible future areas of research that could be conducted, based upon the findings of this study.

5.2 – Findings Interpretation

The interview findings allowed the researcher to build conclusions on each of the interview questions. Questions that had no similarity in the responses show the uniqueness to each entrepreneur interviewed. Each of the research questions have been examined and the researcher has constructed the following conclusions.

5.3 – Research Question One

Research question one sought to learn from the lived experiences of mobile app entrepreneurs, what were the backgrounds and motivating factors inspiring entry into the mobile app industry. Interview questions to answer this research question focused on how and why the mobile app entrepreneurs entered the industry. The majority of participants had discussed prior experience in the IT industry, and put a strong emphasis on entering the mobile app industry due to the opportunity for growth. Some of the participants had prior experience of being a CEO, while some were recent university graduates. Many participants talked about the growth of the internet in the nineties and did not want to miss this opportunity.
5.4 – *Research Question Two*

Research question two sought to identify the shared experiences of mobile app entrepreneurs relating to opening and operating a mobile app business. Six questions were asked to participants to compare how the different entrepreneurs operate the businesses and to learn more about the business practices of their companies.

Throughout the questions learning about the operations of the mobile app businesses, both trends and differences were discovered. One of the main similarities among participants was developing for *iOS* products first to perfect the product and then develop for *Android*, or not bother developing for *Android* at all. Another common trend was the lack of interest in developing for external clients. The entrepreneurs had very similar responses stating that priority was the company’s product and had no interest taking any attention away from these products by developing for external clients. The number of apps each firm had developed were low with only one company having built more than three apps. To follow-up on this, only two of the participants stated their firms create apps in multiple categories, while the other participants had no interest in attempting to develop in multiple categories. The final common trend for this research question was participants stating employees were based mainly in the greater Boston area with very few staff working remotely.

5.5 – *Research Question Three*

Research question three asked participants about the key methods of conducting business that the mobile app entrepreneurs use to operate their businesses. Six interview questions were asked to help gain an understanding if similar practices were used and to learn more about how the participants run their businesses.
A common trend that came out of these questions was the importance of having mentorship or guidance in operating the business. Whether the mentor was a personal coach or an investor, participants equivalently expressed the importance or having supports in place. Another similar response arose when many participants described the difficulties of getting their app found in the app stores. With so much competition in place, being able to get the app found by users was described as a major difficulty.

5.6 - Research Question Four

The fourth research question sought to understand what the mobile app entrepreneurs envision for the future of the mobile app industry. Participants were asked about the future of their businesses and what kind of changes they expect to make in the business. Participants were asked to provide their opinion on what kind industry changes they expect in the future. Lastly participants were asked to share what guidance or advice they would provide to someone looking to start a mobile app business in the future.

Among the responses given in this area, a common response occurred regarding where each entrepreneur’s business in moving towards over the next 12-24 months. Over half the participants stated the importance of trying to improve the product, and to get even more user feedback from users. In questioning about future changes expected within the industry, the majority of participants expected the growth to continue, with many saying branches of technology will continue to complement mobile apps and support the growth. Responses regarding advice the participants would offer to anyone looking to enter the industry were extremely different but are valuable pieces of advice to future mobile app entrepreneurs.
5.7 - *Stakeholders affected*

Through the interpretation and analysis of the study’s results, the following recommendations were developed for future mobile app entrepreneurs, educational institutions, and government. Future mobile app entrepreneurs could benefit from the insights provided by the study’s participants. Educational institutions and government should see the opportunity to support the industry’s members through possible growth opportunities.

*Future Mobile App Entrepreneurs* – Throughout the participant interviews, the participants all offered guidance through the shared experiences told. The following points are the areas that were most frequently brought forward:

- Be sure to test the product as much as possible before try to grow the product. Having users provide feedback was discussed to great extent throughout the interviews.
- Get the product in app store and continue to improve the product. Do not try to build the perfect product before in an app store, changes can happen at any time in this industry.
- Get guidance and ask for help. The mobile app industry is very supportive and peers look out for one another.

*Educational Institutions* – This research paper has examined the short history of the mobile app industry and how the industry operates. With revenue expected to increase in the mobile app industry to 46 billion by 2016 (Reisinger), opportunity to educate individuals looking to enter the industry is plentiful. The following are possible way that educational institutions can support the industry.
• Educational programs such as degree, short courses, or apprenticeship level; there is an opportunity to support the players who make up this industry.

• Courses created to support the players already in the industry could benefit those who have not succeeded to rebound and try again.

Government – A topic that had received very little attention in the participant interviews was the role that government plays in the mobile app industry. With the industry growing so fast and producing so much economically, opportunity to support the industry through government assistance exists. Although industry players are not looking for licensing within the industry, the following are areas how government could aid the growth of the industry:

• Develop funding, grants and education programs that could help benefit the industry’s members.

• Develop more government-funded associations to provide assistance to industry members.

5.8 – Further Research
Numerous opportunities for future in the mobile app industry exist. Throughout the findings of this study, common trends appeared among the experiences of mobile app entrepreneurs that hold the opportunity for further research to be conducted. The following are the areas the researcher feels this study has uncovered that could require further research:

• Data as a revenue stream – research regarding mobile app businesses that generate revenue in this method is minimal. With so much attention focused on big data in
the consumer marketplace, research that specifies how data can produce revenue mobile app industry would be valuable.

- **Government assistance** - Why government and educational systems do not have a bigger stake in the mobile app industry. With so much income being generated and growth expected to continue, education and government assistance seem like an obvious need.

- **iOS over Android** - Why so many mobile app entrepreneurs choose to develop for iOS over Android. With similar amounts of products in the market, research specifically focusing on how Android can improve its place in the industry would be worthwhile.

- **App store discovery** - Understanding the different methods entrepreneurs get their product found in the app stores would be valuable. Many interview participants talked about the difficulty in getting the app found, and research learning from those who have succeeded in this area would be valuable.

5.9 – *Conclusion*

This study aimed to learn about the lived experiences of mobile app entrepreneurs, and how they opened and operate their mobile app business. Through 14 interviews, the researcher had the opportunity to hear the many experiences that had been endured and what areas were commonly told among participants. Through all the content provided by the interview participants, the researcher has developed three main points the participants spoke about as summary to the research findings.

- **Test, test, test** – Before trying to grow the product, have people try it and listen to their feedback.
• Listen to customers – In an industry with such a short attention span, whenever a user has feedback, listen to it intently. So many participants were emphatic about this

• Surround yourself (as an entrepreneur), with a good team. Whether this is a co-founder, advisors, or staff, the people around you as an entrepreneur are most likely you most valuable assets.
Works Cited


Reisinger, Don “Mobile App Revenue Set to Soar to 46 Billion by 2016” *News – The


Womack, Brian “Google Says 700,000 Applications Available for Download”

Appendices

Appendix 1 – Email Invitation to Participate in the Study

Hello,

This is message is for (name of mobile app entrepreneur). My name is Adam Doucette, and I am a MBA student from the University of Prince Edward Island (a university on the east coast in Canada). I am conducting graduate research in a study of the lived experiences of mobile app businesses in the greater Boston area in the opening and operation of their mobile app business. I am wondering if you would be interested in participating in a 30 minute interview with me, answering approximately 15 questions relating to the story of how (name of company) came to a reality. I am working with Matt Gross from my Mobile Monday Boston, as the hope is that this research could help guide individuals looking to enter the mobile app industry in the future. All information you would provide would be 100% confidential as no names of businesses, individuals, competitors or products will be used in the report's findings. I am more looking to hear from different mobile app entrepreneurs about how and why they got into the industry, the hardships they have faced, the future directions of their business, and so on.

I would more than happy to come meet you at your office (I am now living in Boston), over skype, or at a location of your choice. If you can spare the time, I would love the chance to chat.

Thanks and hope to hear from you.

Adam Doucette
School of Business
University of Prince Edward Island
Appendix 2 – Participant Consent Form

Dear (name of mobile app entrepreneur),

Thank you for agreeing to participate in this study. The study will consist of 15-20 face-to-face interviews with mobile app entrepreneurs to learn from the lived experiences of mobile app entrepreneurs on how they have achieved their current level of success and to gain their perspectives on the mobile app industry. The interview will be recorded to aid in the actual collection of study data. Each interview will take approximately 30 minutes. Your participation is completely voluntary. You may withdraw from this study at any time or have the freedom not to answer any question.

All information obtained in this section of the study will be held in a way that ensures the anonymity of the respondents within the limits of the law. My supervisor, Professor Susan Graham, and I will be the only persons with access to the data including your identity. To further protect individuals’ identities, this consent form will be sealed in an envelope and stored separately. All efforts will be undertaken to ensure the anonymity of respondents.

This research is approved under the authority of the University of Prince Edward Island’s Research Ethics Board. If you have any concerns about the ethics of the study, you understand that you can contact the UPEI Research Ethics board at (902) 566-0637.

If you have any question, please contact myself, Adam Doucette at (617) 733-1203 or email adammdoucette@gmail.com

By signing this consent form, I (name of participant) consent to participate in this research project. I understand that my participation is voluntary, I hold the right to not answer any question, and I have the right to withdraw any answer during the interview. I understand that I have the right to withdraw my participation, including all my data already collected, at any point until publication of the report. I consent to participation in a 30-minute, audio-taped interview about my experience as a mobile app entrepreneur. I consent to the use of quotes from my interview (without personal or company identifying information).

Participant Signature: ____________________________

Date: ____________________________

Please scan the completed and signed Participant Consent Forms and email to adammdoucette@gmail.com or you may provide the signed form the day of interview. Please keep a copy for your records.

Participant Request for Final Report: Yes, Please________ No, Thank you________

Address to forward: _______________________________________________________________

Email: ________________________________________________________________
Appendix 3 – Interview Questions

Research question 1 - From the lived experiences of mobile app entrepreneurs, what were the backgrounds and motivating factors inspiring entry into the mobile app industry?

*Interview Question 1* - Tell me about how you “got in to” the mobile app industry, and why you decided to start your own business?

Research question 2 - What were the shared experiences of mobile app entrepreneurs relating to opening and operating a mobile app business?

*Interview Question 2* - Tell me about your team at ________________, How many staff work at your company? Do your staff all reside in the greater Boston area

*Interview Question 3* - How long has your company been developing mobile apps? How many apps have you developed at ________________?

*Interview Question 4* - What categories of mobile apps does your firm regularly develop? Would your firm look to try developing for other categories of mobile apps?

*Interview Question 5* - What revenue model does your mobile app business use?

*Interview Question 6* - What is your firm’s experience developing for iOS? Android? Or Both

*Interview Question 7* - Has or would your firm take on developing projects for external clients? If you have done this, can you share how the experience compared to developing for an in-house project?

Research question 3 - What are the key methods of conducting business that the mobile app entrepreneurs use to operate their businesses?

*Interview Question 8* - With the rapid changes in the current mobile app industry, how does your business keep up to date with your competitors?

*Interview Question 9* - Can you describe the biggest challenge you faced in developing your mobile app business?

*Interview Question 10* - Tell me about the best lesson you have learned so far in relation to your mobile app business?

*Interview Question 11* - In your experience developing this business, did you look for or receive any support or mentorship while growing your company? If you did - can you share about the experience, and if you didn’t – do you wish you had had the opportunity to do so?
Research question 4 - What do mobile app entrepreneurs envision for the future of the mobile app industry?

*Interview Question 12* - What characteristic or skill of yourself do you feel was the most important in developing your mobile app business and why?

*Interview Question 13* - If you were to compare yourself as the present CEO/Owner of your company to the CEO/Owner you were in the beginning phases of developing your business, what changes would you say are most eminent?

*Interview Question 14* - What is next for ________________? What changes do you see for this company in the next 12-24 months?

*Interview Question 15* - Can you give your perspective on what changes you see occurring in this industry over the next five years?

*Interview Question 16* - What advice would you offer to someone looking to start his or her own mobile app development company?
Appendix 4 – Research Ethics Board Approval

February 26, 2013

Adam Doucette
School of Business Administration

Re: REB Ref # 6005210

“An exploration of the lived experienced of mobile app entrepreneurs.”

The above mentioned research proposal has now been reviewed under the expedited review track by the UPEI Research Ethics Board. I am pleased to inform you that the proposal has received ethics approval. Please be advised that the Research Ethics Board currently operates according to the Tri-Council Policy Statement 2: Ethical Conduct for Research Involving Humans and applicable laws and regulations.

The approval for the study as presented is valid for one year. It is your responsibility to ensure that the Ethics Renewal form is forwarded to Research Services prior to the renewal date. The information provided in this form must be current to the time of submission and submitted to Research Services not less than 30 days of the anniversary of your approval date. The Ethics Renewal form can be downloaded from the Research Services website (http://www.uperi.ca/research/ethics_forms).

Any proposed changes to the study must also be submitted on the same form to the UPEI Research Ethics Board for approval.

The Research Ethics Board advises that IF YOU DO NOT return the completed Ethics Renewal form prior to the date of renewal:
- Your ethics approval will lapse
- You will be required to stop research activity immediately
- You will not be permitted to restart the study until you reapply for and receive approval to undertake the study again.

Lapse in ethics approval may result in interruption or termination of funding.

Notwithstanding the approval of the REB, the primary responsibility for the ethical conduct of the investigation remains with you.

Sincerely,

[Signature]

Malcolm Murray, Ph.D.
Chair, UPEI Research Ethics Board