

Technology Solutions of Real-life Scenarios using Mobile Applications: An Analysis

Kapil Mehta*, Yadwinder Kumar, Ankita Thakur

Department of Computer Science and Engineering, Chandigarh Group of Colleges, College of Engineering, Mohali, Punjab, India

Abstract

This study presents the outline of mobile apps usage through the smartphones by the users. The world is humming to the tune of mobile apps and providing rich data content through digital revolution of technology. The technological advancements in the mobile apps are raising the standard of various business sectors worldwide. Smartphones built with mobile apps are allowing customers to get their services while sitting at home. The competitive market demands upgradation of the apps to facilitate end users to simplify their work. This study demonstrates that how users use mobile applications while ordering food from the restaurants, booking flights and check-in hotels during their tour and many more real-life scenarios. Every real-life situation can be handled by the users in the comfortable and convenient manner through the usage of mobile apps. The usage of mobile apps really affects business and other markets. This study also presents the various competitive advantages facilitated by the mobile application development companies as compared to the small scale business firms. Any firm can survive better than their competitors by the efficient use of technology solutions. Statistical figures of customers using mobile apps for their real-life situations from different parts of the world have been presented here to express the impact.

Keywords: Smartphone popularity, competitive market, business firms, technology

***Author for Correspondence** E-mail: kapil.4110@cgc.edu.in

INTRODUCTION

The world is humming to the tune of mobile apps and providing rich data content through digital revolution of technology [1]. As the time is advancing, the importance of mobile phones has become the basic need of everyone's life. The mobile is becoming the central operative till without its absence, we cannot manage even a single day. The mobile phones embedded with mobile apps are in great demand today [2]. Such mobile phones can be of any brand but mobile apps installed on such Android, Iphone, blackberry platforms add a great zeal to the human life. Mobile apps make the tasks easier that help humans to remind something, to track fitness activity goals, to listen music, play videos or many more. The scope of mobile apps is unlimited and having no limitation of staying at one's local place. Humans can manage apps even on the go.

As life is getting busier day-by-day and craze of smartphones is also increasing as mobile app development companies are growing. We cannot ignore mobile apps in our daily routine because these are very useful to manage our daily routine [3].

MOBILE APP CATEGORIZATION

A mobile app which is commonly referred to as app is a software based application that can be run on any smartphone or tablet computer. It is shown in the form of small graphical icon on which customers can click to open the functionality. There are various sub icons in it similar to website having collection of web pages that adds more facilities to serve customers time-to-time.

Depending upon the nature of application, mobile apps can be categorized according to the different domains [4]:

1. **Native:** Native Apps are the apps that are built for a specific platform or operating system. Mobile apps designed for one platform can be used there only instead of others. The main advantage of native apps is the ease of use and rich user experience. These apps can be downloaded from an app store and prime purpose is to reach target customers.
2. **Web:** The functionality of web based mobile apps is somewhat similar to native apps. These apps use an internet enabled browser to run applications.
3. **Hybrid:** Hybrid apps are website applications, which means, they use elements of both native and web apps. These applications can be specifically built using different multiplatform web technologies.

ROLE OF MOBILE APP DEVELOPMENT COMPANIES: FACTORS

The world is crazy in accessing mobile apps and using smartphone devices. In this regard, mobile app development is the hottest business and such development companies are working hard in it. Their ultimate goal is to give convenience to customers that enable users to access the stuff in a single go. Such apps pull traffic on a higher conversion rate [5]. Mobile app development companies have totally changed the world by giving more power to the hands of customers and business to entrepreneurs. There are the following factors which affect the highest growth of development companies:

1. **Mobile World:** Every individual in the world is in the shelter of sky where everyone is rigid to access apps and enjoying the modern environment. As compared to traditional websites, mobile apps provide better touch GUI and allow intuitive purchasing and browsing.
2. **More Visibility:** Most of the users spend more than half of their time to access mobiles. By clicking on the icons many times throughout a day allows customers to miss not even a single notification? Smartphone is the smart brain of the users where human brain can miss few alerts or notifications but mobiles cannot if used in safe mode.

3. **Direct Interaction:** Mobile apps reach their customers in the most interactive way that attract customers by seeing the benefits and promotions during sales etc. Through time to time push notifications, customers can get reminders about latest products and services.
4. **Social Awareness:** Social media is the most popular thing that provides more reachability to the audience for particular brand. By the use of social media, users are able to review, share or discuss about the products.
5. **Real-time Data Capture:** With the advent of posting recent and current updates, mobile apps provide facility to record or capture real time-data. This real-time information can be used to deliver consumers for making decisions on how to improve consumer behavior through apps [6].
6. **Increase in Sales, Better to Serve:** Users can analyze a product before purchasing. Mobile apps help to change the view of customer and doing a product analysis.

ROLE OF MOBILE APPS IN BUSINESS GROWTH

Technology has changed every aspect of word everywhere. This leads to the convenience and ease of use. In the past, customers visited supermarket or physical stores to purchase something and retailers had to visit at customers place to sell thing but now the history has changed. Retailers first have to make a functional website as an online shop and display their products on the web page or can embed mobile apps using that functionality. Customers also can access these websites and can do online shopping without visiting retailers place and can save time. This is the need of the hour; otherwise they will run out of the business [7]. Mobile apps provide a fuel to the growth of business in every aspect from managing the relation of customers to document their reporting, to manage account transactions and getting feedback from customers. Mobile apps provide digital view through smartphones that can be accessed by sitting at any location that allows network connectivity. It enhances employee engagement and collaboration at their

workplace. Another main aspect in the growth of mobile apps is the decreasing cost of building a mobile app [6]. Building an app is much affordable if compared to the past. This happened due to increase in customer reachability and increasing interest in the design and customer interest in mobile/online shopping. There are few ways that help consumers to fuel their business growth:

1. Customer Reachability

Many business firms provide handy walky-talky environment to their customers by providing apps that allow customers to just touch or pin point icons to access the shopping. It extends local range to world-wide globally by facilitating customers at par. Business firms allow location based marketing that allows customers to engage contextually. Mobile apps allow customers to access store available at all the times.

2. Enhancing Digital Traffic

User friendly environment attracts customers to access apps. If the user interface is much friendly then it forces customers to use it again and again as compared to other available competitive market. This increases the value of brand too. Mobile apps can boost traffic to a greater extent by using SEO (Search Engine Optimization) that helps to increase brand awareness. Logo of the business firm also should be attractive that boosts traffic to much extent.

3. Creating Loyal Customers

When users download the app content online, then if they find less traffic, more convenience and attractive design then they get attracted to it and act as loyal customers because they will use it further again and again. It is a better native experience to access it at anytime and anywhere. Customized messages, loyalty points, discount vouchers, mega sale opportunities facilitate customers to build trust on such business firms and they will promote it also amongst their peers [8].

4. Gathering Insights

Customer opinions play a great role in the recognition of brand. After shopping experience like how they like the features like quality, price etc. of a particular product/item purchased by them, or how

was their chatting experience with the experts. All these things help business firms to grow by getting in touch with them. A large portion of customers is spent on accessing such apps that help business firms by tracking their activities on the screen and getting their favorable responses recorded.

Figure 1 is showing the year wise growth of downloading and using mobile apps throughout the years which is continuously increasing. As there is an increase in the software users, the business of software or app development companies and tour and travel business firms has been increased. All the mobile apps are centralized on the app store where customers can download their desired mobile app. Customers will download the app depending upon the discount offers provided by such app management companies. If the company is providing more offers on booking rooms or flights is the first to be top on the market.

ROLE OF MOBILE APPS IN TOUR AND TRAVELS

The technology has changed the lives and brought revolution in business in travel. It allows the booking of a memorable trip with the help of digital mobile apps. It allows customers to customize their itinerary, booking flights, staying at wonderful places and converting their stay into a pleasant one. They can take a digital tour to the any location of the world by sitting at their home place itself. In the past, travelers had to visit the offices of various tour and travel agencies, queuing up and waiting for their turn or service. But now

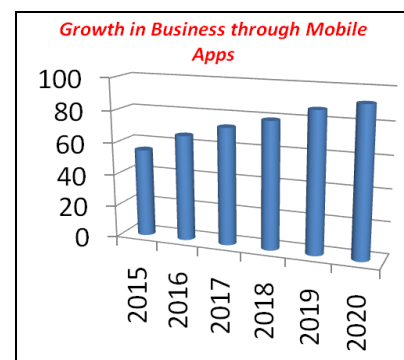


Fig. 1. Growth of Downloading and Using Mobile Apps in the Subsequent Years.

days, with the use of mobile apps they can plan a better holiday according to their choice without paying much to the intermediate parties. If some business firm is in the business of tour and travel then it is the peak time now to download the app and attract their customers [9]. To fight with the rivals, there are various mobile app development companies in the market that facilitate tour and travel business firms to attract customers to their digital tour. As compared to the past, business firms can experience best as per following:

1. **Manage the Bookings**

One of the prime benefits is that customers can make their bookings by sitting at their location which is a millions of miles or kilometers away from their desired destination. They can search flights, visit WebPages of hotels and many more. Business firms can add more functionality to their apps by introducing weather updates etc. to aware customers while on the go.

2. **Develop Client Centric Platform**

3. **Reduces Paper Work and Simplifies Transactions**

While doing your bookings, there is no need to bring the original documents during the go. Customers can just save a soft copy of their hotel booking receipts etc. in their smartphone. With the mobile apps, the process and formalities of doing bookings is reduced. Customers can pay in the online mode even on bank holidays, Saturdays, Sundays etc.

4. **Enhancing and Providing Real View**

Everyone knows that travelers are very excited to visit the tourist place and during this period, they make virtual images in their minds. Travel apps allow customers to see images or videos of the desired destination. Travelers can know about interesting and unknown facts of the location at single tap on their mobile phones without visiting that place actually [10].

Every user has different requirements of using mobile apps in different-different scenarios. The analysis of such scenarios is shown in the Figure 2.

ROLE OF MOBILE APPS IN RESTAURANTS

There are numerous reasons where small business firms cannot survive every year due to the decreases dependence of mobile apps in their business. In the previous past, it was told that 'Know Your Customer' but nowadays it is said that 'Understand Customer's Behaviour'. With the help of mobile apps, the time that customer devotes to access the subsequent part of their mobile application can be noticed and customers can be attracted to order or to buy by sending various push notifications or offers to them. The food industry is always in a booming demand to offer various foods in the restaurants of big cities. The food sector is highly profitable industry due to its broad potential, and to attract customers to add leisure in their life. People are always in the thought of good taste. They cannot compromise their taste at any cost and such benefit is grabbed by the food and restaurant sector. Nowadays, technology has covered food sector to serve their customers better. Nowadays, customers can order smart food by their smartphones.

Such advantages or technology solutions for online food reservations through mobile applications are listed.

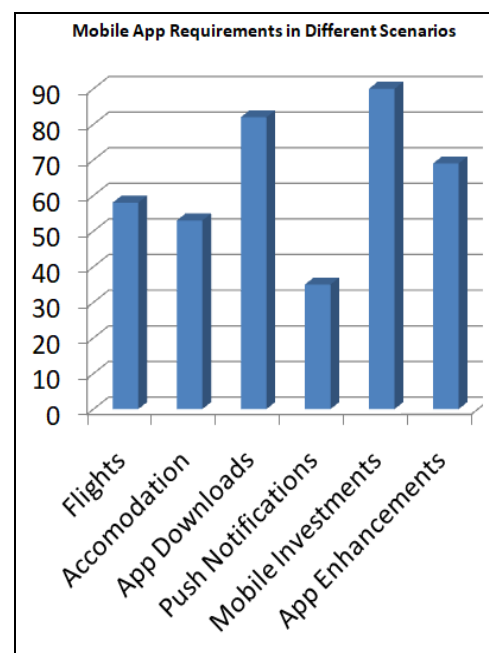


Fig. 2: Mobile App Requirements in Different Scenarios.

Online Slot Reservation

There are various facilities provided by the food restaurants to reserve their table online by sitting at their homes. This functionality of mobile app provides convenience to their customers without wasting much time by visiting restaurants first to do their bookings.

Ordering Food through Digital Menu Card

Various restaurants provide the facility to order food through mobile apps where customers can order food by digitally tracing the pictures of fabulous foods, adding extravaganzas to it. The detailed price list is also mentioned there. Customers also can read the reviews of other customers who had visited such restaurants earlier. By reading such reviews, customers can get the idea of the food quality being served at such restaurants.

Online Food Chains

Food can be ordered online by using various online platforms by the customers sitting at their home, office etc. There are plenty of apps available online that can be opted by the food shoppers. There are many apps that provide various offers on booking of food online like One on One and other various cashbacks. Discounts can be of 5 or 10% off on such debit/credit cards of so and so banks. Delivery of food can be tracked by the customers sitting at home too that when the food is being baked or cooked and when is to be dispatched.

Introducing Loyalty Points

Loyalty points is the another name of discounts and offers. By introducing loyalty points or reward points, customers can get offers after visiting like 3rd visit, 5th visit and 7th visit etc. This is not such hard and fast rule. It such depends upon restaurant to restaurant to introduce such programs or not. Just all set for to attract more and more customers at their place.

Better Offers during Check-ins

Nowadays everything is very popular on social media. We are seeing everyday that so and so person is entering check-ins of various social media platforms and websites like “Someone is eating a crispy pizza in someone restaurant”, “Someone is feeling Foodie at somewhere” and so on. The main benefit to restaurants by the customers’ check-ins is that audience gets

updated by having a craze to visit or order food from such restaurants.

Online Reviews and Ratings

Mobile applications provide facilities to add comments or reviews by the customers who had visited or ordered such food from the restaurants. These are the just textboxes where customers can type the text and add positive and negative comments to the restaurant or can give rating from one star to five stars. Such ratings are very important for the restaurants because restaurant business firms can know about the quality of their food. Positive reviews attract customers and negative reviews provide distraction to the outside audience.

CHALLENGES CONCERNING MOBILE APP DEVELOPMENT

While users working on mobile application face various challenges which are as below:

Competitive Market

In the mobile world, we meet with variety of apps for a single use. Development companies have a pressure to advertise their apps on the screen of customers so that they can forcibly download the content or apps that will provide a business to the consumers. To direct customers to use a particular app/product, ASO (App Store Optimization) is used which involves usage of keywords and phrases that direct users to a product. Like, when we search something on Google, then various suggestions are popping up on the screen, which is somewhat similar to the content that we are looking for. Icons and colors are also most important aspects while taking into consideration. The things which attract the customers most are the first to download [11].

Variability in Screen Size

The screen size of each mobile device is varied from other one. Designing an app, while considering only a single unit mobile device, is a worst decision. So, it is important to consider the design of app that can be executed on every mobile device. The design of app should be responsive that can provide more flexibility to be adjusted on every mobile phone [12].

Battery Life

One important factor that affects the performance of mobile apps is battery power.

The design of application should be bug free and must be less power consuming. The battery power can be interrupted according to content that rise flooding in cache and disrupt the performance.

Security

While downloading the app content may ask to access the personal data stored on mobile device that may affect privacy of the users and attack on the customer's data. Authentication passwords should be strong that cannot be judged by the attackers.

Using a mobile app by the customers sitting at different places requires the high speed internet connection to use such functionalities. Accessing mobile apps through internet connections provides business to the internet service providers that can provide customized plans to the customers to use subscriptions from them. There is a fight between various internet service provider companies which provide various discounts, cash backs to the customers to attract them. There are also various third party apps that provide the functionalities of adding wallet in their mobile apps where customers can add amount to the wallet and get it used anytime. Today, using a mobile app is very easy that helps old people to get service in their region without taking help of the unknown persons or strangers.

CONCLUSION

This study concludes that there is a technical technology solution of every real time situation. Whether, it is a travel, food, shopping, grocery and many more. All such facilities can be availed by sitting at their homes; and ordering such things is a one click away. There are various smart mobile applications that can be downloaded by the users free of cost. Rather, there are various paid subscriptions and downloads too. There is a fight between the application developers just to provide better user interface to provide convenience to the customers. This study also concludes the various sectors of real life that are totally dependent on the mobile applications. One mobile tap can be equivalent to the income of million dollars to the developer companies. By discussing such

examples, it is very difficult to assume life without smartphones.

ACKNOWLEDGMENTS

Acknowledgments recognize the contribution of funding bodies and anyone who has assisted in the work.

REFERENCES

1. Mobile Marketing Association. USA 1670 Broadway, Suite 850, Denver, CO 80202. 2008.
2. Ngai EWT, Gunasekaran A. A Review for Mobile Commerce Research and Applications. *Decis Support Syst.* 2007; 43(1): 3–15p.
3. Mobile Web. Wikipedia, URL: http://en.wikipedia.org/wiki/Mobile_Web.
4. The Nielsen Company. The State of Mobile Apps. Global Mobile Application Market (2010–2015), Markets an, Aug 2010.
5. IBM Survey: IT Professionals Predict Mobile and Cloud Technologies Will Dominate Enterprise Computing by 2015. Posted Oct 17, 2010.
6. Anuj Khanna. Market Report. *The Future of Mobile Application Storefronts*. Wireless Expertise Ltd., 2009.
7. Harnil Oza. The Impact of Mobile Apps on Business. Apr 2017.
8. Juned Ahmad. *4 Invincible Ways Mobile Apps Fuel Business Growth*. Comvince and Convert.
9. Mobile Web. Wikipedia, URL: http://en.wikipedia.org/wiki/Mobile_Web.
10. Speedx Infotech. How Mobile Apps are Transforming the Travel and Tour Industry. Oct 2017.
11. Adriana N. *Uses of Mobile Applications for Smart Phones*. <http://ezinearticles.com/?Uses-Of-Mobile-Applications-For-Smart-Phones&id=5161301>, Visited 24-10-10.
12. Sarah Perez. *Mobile App Marketplace: \$17.5 Billion by 2012*. 17 Mar 2010.

Cite this Article

Kapil Mehta, Yadwinder Kumar, Ankita Thakur. Technology Solutions of Real-life Scenarios using Mobile Applications-An Analysis. *Journal of Artificial Intelligence Research & Advances*. 2019; 6(2): 76–81p.