Volume -4, Issue- 3, Jun. 2017, ISSN: 2394 - 8124

Impact Factor: 4.564 (2015)

Website: www.jmeit.com | E-mail: editorjmeit@outlook.com|jmeit@outlook.com



An Empirical Study on Gaming Industry in India with Special Reference to the SmartPhone Games & Smart Generation Players of School and College

DOI 10.5281/zenodo.821242

Pawan Kalyani

pawankalyani@gmail.com

Abstract: Gaming industry is a multi – million dollar industry worldwide it is growing rapidly even more then movies and music industry. Start from the Mario to the latest games in PC, Consoles or in Mobile phones there is a drastic change in graphics and animation. In this empirical research paper the researcher wants to explore the specific area of smartphones gamers and smart generation users of school & colleges due to availability of high end smartphones in different price range the gaming market is on the boom. The research paper has a series of questionnaire to find out the various aspects about the smartphones game and gamers.

Keywords: Gaming industry, smartphones gamers, smartphones games, video games, consoles, students of school and colleges, Gaming Industry in India, smart generation.

I. INTRODUCTION

World gaming industry is on the boom, today from almost all age group are playing games from 1970s to till date the gaming scenario has changed drastically the graphics, content, from 2-D to 3-D, virtual reality etc. the gaming industry has successfully penetrated into mobile devices. Most of people like to spend their free time while playing games on mobile devices as young generation is mostly playing the games, according to the news published in Deccan chronicle, dated 5/2/2017 the Indian mobile gaming market to cross \$400 million by 2020. Revenue from mobile-based gaming stood at USD 265.8 million last year and forecast to touch USD 286.2 million in 2017. According to the CII-TechSci Research report, revenues from mobile-based gaming stood at USD 265.8 million last year and is forecast to touch USD 286.2 million in 2017. The number of mobile gamers in the country is also expected to grow substantially from 198 million in 2015 to 628 million by 2020 and further to 1.16 billion by 2030, it added. "Gaming industry in India has witnessed a shift from console gaming to mobile gaming, with growth and improvement of wireless connectivity in the country. Ease of playing mobile games coupled with rising mobile phone subscribers has fuelled growth of mobile gaming in India over the last few years," it said. [2]

In this research paper the author is focusing on the smart games and smartphone gamers of school and colleges. To understand the situation in a better way and the reason to study that India has world's largest youth population and world's second largest Internet population this could be the reason to attract game makers to have a business interest in India.

II. A BRIEF HISTORY OF GAMING INDUSTRY

To understand the development of gaming industry we need to briefly discuss the history of gaming industry, earlier it was an achievement but not so much commercialized. Prior to the 1970s, there was no significant commercial aspect of the video game industry, but many advances in computing would set the stage for the birth of the industry. Many early publicly-available interactive computer-based game machines used or other mechanisms to mimic a display; while technically not "video games", they had elements of interactivity between the player and the machine.

1970s



The Magnavox Odyssey, released in 1972, was the first home gaming console.

In 1971 the arcade game, Computer Space was released. The following year, Atari, Inc. released the first commercially successful video game, Pong, the original arcade version of which sold over 19,000 arcade cabinets.

Volume -4, Issue- 3, Jun. 2017, ISSN: 2394 - 8124

Impact Factor: 4.564 (2015)

Website: www.jmeit.com | E-mail: editorjmeit@outlook.com | jmeit@outlook.com

1980s



The Nintendo Entertainment System, released in 1985, helped to revive the American gaming industry after the video game crash of 1983

The early 1980s saw the golden age of video arcade games reach its zenith. The total sales of arcade video game machines in North America increased significantly during this period, from \$50 million in 1978 to \$900 million by 1981, with the arcade video game industry's revenue in North America tripling to \$2.8 billion in 1980.

1990s



The PlayStation was the most popular gaming console of the fifth generation, which saw the common adoption of CD media.

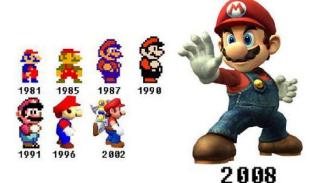
The 1990s saw advancements in game related technology. Among the significant advancements were:

- The widespread adoption of CD-based storage and software distribution
- Widespread adoption of GUI-based operating systems, such as the series of Amiga OS, Microsoft Windows and Mac OS
- Advancement in 3D graphics technology, as 3D graphic cards became widely adopted, with 3D graphics now the de facto standard for video game visual presentation
- Continuing advancement of CPU speed and sophistication
- Miniaturization of hardware, and mobile phones, which enabled mobile gaming
- The emergence of the internet, which in the latter part of the decade enabled online co-operative play and competitive gaming

2000s

Today, the video game industry is a juggernaut of development; profit still drives technological advancement which is then used by other industry sectors. Technologies such as Smartphones, virtual reality and augmented reality are major drivers for game hardware and gameplay development. [1]

The Evolution of Mario



*Dates based on US release dates.

Geekstir.com





The above image shows the evolution of Mario, from 1981 to 2008 it is very clearly seen the improvement in the graphics and gaming environment. Not only in the Mario, but also in other games and there comes the competition in the game makers too. This competition gives rise to the million dollar gaming industry.



Volume -4, Issue- 3, Jun. 2017, ISSN: 2394 - 8124

Impact Factor: 4.564 (2015)

Website: www.jmeit.com | E-mail: editorjmeit@outlook.com|jmeit@outlook.com

In 2016, India joined the world leaders in the gaming industry. In Q2 2016, India ranked fifth globally by game downloads. According to the report, it is expected to surpass both Russia and Brazil in the coming years.

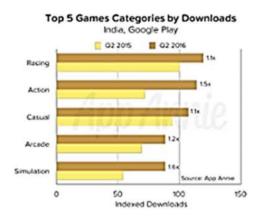


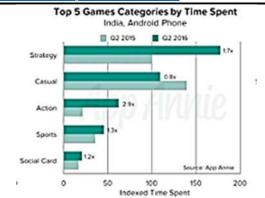
Top countries by game downloads. Source: App Annie

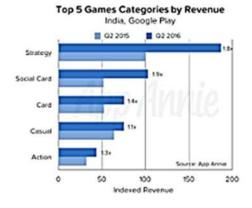
Experts say that increasing adoption of smartphones has enabled mobile gaming to leapfrog in a big way and India is well positioned to be the next major gaming market. They say that the lower-tier Indian cities also have a large contribution in the rising market.

According to the report, between Q2 2014 and Q2 2016, game downloads in India more than doubled, with Google Play generating 13 times more downloads compared to iOS. In Q2 2016, over 300 million games were downloaded on iOS and Google Play combined in India. "The volume growth is a positive step towards the development of the Indian gaming industry. I am very bullish about the growth in the Indian mobile gaming industry. With the expansion of smartphones in the country, the number of downloads will further rise," says Deepak Ail, Co-Founder and CEO of Roosh Interactive, who has been in the gaming industry for the past 18 years.[3]

Improvements in wireless network coverage and affordability of telecommunications services, coupled with continued initiatives to extend direct carrier billing, are bound to result in an increase in game purchases in India.







Top 5 games by downloads, time spent, and revenue in India. Source: App Annie

Although mainstream favorites such as Candy Crush Saga rule in India, there's ample opportunity for domestic publishers. One example of a successful locally published game is Train Simulator 2016. Released in March 2016 by Timuz, it's an endless runner game mixed with familiar themes and settings from India's railway network, which is one of the most extensive in the world.

Teen Patti by Octro in the social card genre is another example. Though it doesn't figure in the top games by download, it ranks high on the list of apps by time spent and revenue. Teen Patti is a three-card game traditionally enjoyed as a social activity in India. It is localized in Hindi, Marathi, and Gujarati. [4]

III. SMARTPHONE USERS

India, with around 584 Million mobile subscribers (FY 2010) represents one of the world's largest, fastest growing, and highly untapped mobile gaming markets. Particularly, past few years have been quite revolutionary for the industry as it saw emergence of smartphones, GPS enabled sets, and 3G handsets. Consumers have also given tremendous response to the world class offerings of domestic and foreign players and accepted new revenue models, which are directly linked with industry's developments and future expansion.

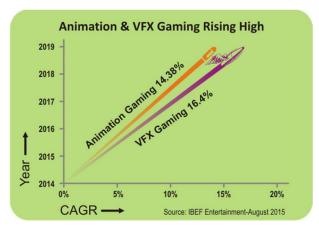
Volume -4, Issue- 3, Jun. 2017, ISSN: 2394 - 8124

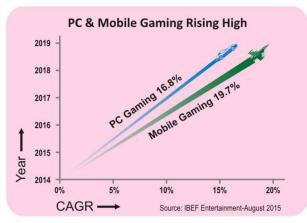
Impact Factor: 4.564 (2015)

Website: www.jmeit.com | E-mail: editorjmeit@outlook.com|jmeit@outlook.com

Show Network, an American digital cable and satellite TV channel, snapped up Bengaluru-based Bash Gaming (that makes casino games for social and mobile platforms) for about \$160 million in February 2014.[7]

The massive mobile subscriber's base, technically upgraded games, advanced smartphones, and 3G enabled handsets have provided much awaited boost to the industry, which grew more than fivefold during 2005-2009. The research revealed that in coming year also, the industry will continue to post staggering market growth. The projected CAGR growth of around 74% during 2010-2013 will help India become one of the most attractive destinations for foreign mobile game developers and distributors for investments and outsourcing services.[5]





Mobile Gaming to cross USD 571 million by 2016 at 134.5% CAGR between 2013-2016 leading to 22.8 percent CAGR growth with 208.2 million mobile game users Mobile games and app market projected to be worth USD 400 million by 2016 Estimated at USD 744 million in 2014 the Animation / VFX industry is expected to grow at CAGR 16.3% The PC gaming segment is estimated at USD 59.7 million in 2014 and is expected to grow at CAGR of 16.8% to touch USD 130.0 million in 2019 Cyber Café Market Is currently estimated at 3000 cafes of which 1500 have 5 or more machines dedicated to games 95% are mobile centric games, Growing focus on the 'kids genre', Arcade style games are one of the most popular genres, followed by puzzle and racing genre, Gaming based on famous hyped events like Kaun Banega Crorepati, T2Ofever.com, IPL, Khel Kabaddi, etc.[6]

There have been few successful acquisitions that have raised the bar for gaming start-ups' potential. Indiagames was acquired by Disney for around \$100 million in 2011 and Games

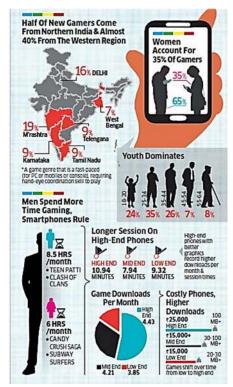
IV. SIZE OF INDIAN GAMING INDUSTRY

In 2016, India joined the world leaders in the gaming industry. In Q2 2016, India ranked fifth globally by game downloads. According to the report, it is expected to surpass both Russia and Brazil in the coming years.

Experts say that increasing adoption of smartphones has enabled mobile gaming to leapfrog in a big way and India is well positioned to be the next major gaming market. They say that the lower-tier Indian cities also have a large contribution in the rising market.

According to the report, between Q2 2014 and Q2 2016, game downloads in India more than doubled, with Google Play generating 13 times more downloads compared to iOS. In Q2 2016, over 300 million games were downloaded on iOS and Google Play combined in India.

"The volume growth is a positive step towards the development of the Indian gaming industry. I am very bullish about the growth in the Indian mobile gaming industry. With the expansion of smartphones in the country, the number of downloads will further rise," says Deepak Ail, Co-Founder and CEO of Roosh Interactive, who has been in the gaming industry for the past 18 years.[8]



Volume -4, Issue- 3, Jun. 2017, ISSN: 2394 - 8124

Impact Factor: 4.564 (2015)



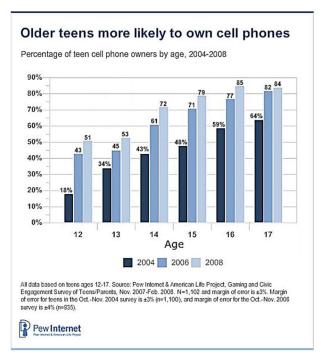
India's mobile gaming market is worth \$214 million, and is dominated by arcade*, puzzles and racing games. Eighty-five per cent of gamers are below 44 years, and almost two-thirds of all are males. [9]

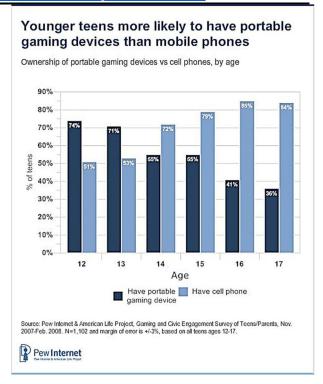
several domestic companies including Games2win (Turbo Cricket), Moonfrog Labs (Teen Patti Gold) and Nazara Games (Chhota Bheem Jungle Run), and international ones such as Imangi Studios (Temple Run), the number of gamers from India has at least doubled since December. [10]

"In India, besides improving game design and the technical aspects of a game, localisation is essential in improving retention levels, from offering the game in a multilingual format, tapping into tier-2 and tier-3 towns to including culturally relevant aspects in a game," said Amit Khanduja, CEO of Reliance Games. [11]

V. YOUNG GENERATION OF SCHOOL AND COLLEGES

ost who study the generations would say that Generation Y (those born from 1980 to 1995) was our first generation of Digital Natives — unconsciously competent users of both computers and of the Internet. The World Wide Web, the advancement that more than any other popularized the Internet, started in 1993, just as the oldest Y's were turning 13, in their prime stage of influence.





But that's not to say that the Re-Generation hasn't been shaped by a major technology leap forward: in their case, they are the first unconscious participants in an era when everyone has access to everything, everywhere, at every time. This is the generation of mobile technology, wireless communication, and clouds of constant content.

Mobile technology. Fifteen years ago, most home computers weren't even linked to the Internet. Today, our computers are both linked and, in many cases, mobile. With more than five billion mobile users worldwide and a massive global network, small mobile devices with significant computing power have become a routine part of day-to-day life for people of all ages. The combination of a smartphone's intuitive interface and thousands of apps for iPhones and Androids aimed at young children has fast made it a child's favorite plaything. And as the smartphone market continues to explode, more parents are passing their phones to their offspring as tools to educate or gadgets to pacify.

Two-thirds of 4- to 7-year-olds have used an iPhone or iPod, 6% of 2- to 5-year-olds have their own smartphone, 50% of 11 year olds have own cell phone

10% of households with children aged 6-12 have iPads (compared with only 3% of other households); 35% of these households with young children plan to buy some brand of tablet computer in the next year

72% of the 100 top-selling education apps in Apple's iTunes App store this year were aimed at preschoolers and those in elementary school

Volume -4, Issue- 3, Jun. 2017, ISSN: 2394 - 8124

Impact Factor: 4.564 (2015)

Website: www.jmeit.com | E-mail: editorjmeit@outlook.com|jmeit@outlook.com

One of the first products aimed at putting an iPhone into a baby's hands (Fisher-Price's oversize case, providing coverage against drools and tantrums, while doubling as a rattle), rapidly sold out on Amazon; the three apps designed for the case have been downloaded more than 700,000 times

Wireless communication. In November 2001, U.S. wireless service providers began to connect their networks for text messaging, allowing subscribers on different networks to exchange text messages. Since then, the number of text messages in the United States has grown astronomically to over 7 billion messages sent every month. One of the biggest behavioral traits of the Re-Generation is a preference for texting over talking.

Kids 11 to 14 spend, on average, 73 minutes a day texting, The average teen sends more than 50 texts a day. Sherry Turkle, director of MIT's Initiative on Technology and Self and author of Alone Together, has spent years studying the psychological effects of texting on teens. "Kids have told me that they almost don't know what they are feeling until they put it in a text."

Cloud Computing and Unlimited Access to Content. The last fifteen years have seen an explosion of technologies and applications that have given us easy access to content in multiple forms: Google (1998), iTunes (2001), Wikipedia (2002), Facebook (2004, YouTube (2005), and Twitter (2006) are just a small sample of technologies that found their way into our vocabularies and day-to-day lives. Add cloud computing to this proliferation of content and resources and content become accessible — anytime, anywhere. Many applications that were previously expensive or unavailable are now free to anyone with a web browser.

For members of the Re-Generation, access to unlimited content and endless activities and games is a fact of life. Over 25% of 2-5 year olds and over 40% of 6-8 year olds use the Internet

88% of 6-8 year olds use the Internet to play games; 37%, to get help with homework; 25% to get the "inside scoop" on what interests them; and 22% to read and write email, 90% of tweens (10-12) play online games. Younger children spend over 10 hours a week playing video games

The amount of time all kids spend online daily has tripled in the past 10 years, and, in many cases, kids are media multitasking, packing an average of 8.5 hours' worth of media into 6.5 hours a day. [12]

VI. BEST GAMING PHONES IN INDIA FOR JUNE 2017

The mentioned list of the smartphones is an example how the mobile manufacturer are looking at the industry, more facility, more sophistication, advance features, better memory and space and lots more with the never ending list of exciting features of smartphones mobile manufacturers are making gaming mobile devices to entertain more in this race Apple, Sony, Google,

Samsung are key players. If we look at the prices like Samsung Galaxy S8+ costing INR 64900, it is almost 65 thousand it is a very high end price for Indian market. With the growth and development of the market the affordability of many thing that includes high end priced products easier due to finance availability and other facility people are looking forward to buy these products.

Product Name	Price starting from	Available at	Rating
Apple iPhone 7 Plus	56999	Amazon	80/100
Apple iPhone 7	43999	Amazon	80/100
Samsung Galaxy S8	57900	Flipkart	83/100
Google Pixel	56000	Tatacliq	78/100
Samsung Galaxy S8+	64900	Flipkart	83/100
Google Pixel XL	54000	Flipkart	77/100
Sony Xperia XZs	47399	Flipkart	79/100
OnePlus 3T	29999	Amazon	83/100
Samsung Galaxy S7 Edge	49990	Amazon	87/100
Moto Z	N/A	N/A	N/A

Table 1: showing the various high –end, high priced gaming smartphones.

Source: http://www.digit.in/top-products/best-mobile-phones-for-gaming-178.html [13]

The basic purpose of mobile device was to communicate, to transfer the message from one person to the other with the facility of mobility. Gradually the technology up gradations makes the mobile device handier and more useful to the man, it has almost replaced computer in many ways. With the many usages of mobile phone it became smartphone and it is being used more for entertainment purpose. Many people especially young generations are very close to gaming and with the smartphone availability and better internet connectivity is becoming more popular.

Volume -4, Issue- 3, Jun. 2017, ISSN: 2394 - 8124

Impact Factor: 4.564 (2015)

Website: www.jmeit.com | E-mail: editorjmeit@outlook.com | jmeit@outlook.com

VII. TOP GAMES FOR SMARTPHONE

1. Angry Birds



It is not a new name, we all have heard of it. It is a game developed By Rovio Entertainment. It is praised for his comical style, addictive gameplay option, and very low price. Its popularity led to creating many versions and for different platforms like gaming consoles and personal computers. There is also a television series and a feature film based on the plot of angry birds.

2. Candy Crush Saga



It is basically a puzzle game based on Match-three concept. Further, it has special matching options included. Even though it is a puzzle game, it is very entertaining and addictive at the same time. This online game is available on every platform. It has updated on a regular basis. The latest version has 665 levels provided by Dreamworld and 1100 regular levels on Facebook for game players.

3. Counter-Strike



It is developed by Valve Corporation and a first person shooter game. It is also released on OS X, Linux and on Xbox console. In this, the player experiences the role of combating team member and attacks on different terrorist groups.

This game allows you to customize your accessories and weapons at the beginning of the game, with the point earned after the successful end of each round or task.

4. Criminal Case



It is commonly known as 'CC'. It is an online game based on the detective themed objective game. It becomes very popular with its release in 2013.

Due to its popularity it is then released on iOS and Android versions worldwide. This game further crowned as the Facebook game of the year after beating Candy Crush.

5. Teen Patti



A poker game requested to be played by adults only. It is very addictive game. In this, you can play with your friends, and anyone who is online in that game, based on the bet and table you selected or allotted. You are getting a daily bonus in the form of chips to play this game continuously.

This online game has other features like never wait for a game, free chip bonus every day. You can invite your Facebook friends on the private table. You can also play with millions of real players around the world.

6. Pool Live Tour



Every game lover had once played pool game, or some called it snooker. Pool live tour, is a must include in Top 10 online games in India. It allows you to play with real-time rivals.

Volume -4, Issue- 3, Jun. 2017, ISSN: 2394 - 8124

Impact Factor: 4.564 (2015)

Website: www.jmeit.com | E-mail: editorjmeit@outlook.com | jmeit@outlook.com

Website: www.jmeit.com | E-mail: edito You can play with millions of player from around the globe, connected with pool live tour. In this, you can play to get higher rank, experience new sticks. You can also become part of the tournament. Receive daily benefits in a form of coins or chips to continuously play this game.

7. Pirate Kings



This game has a proved phenomenon of easy to learn but hard to put down. This is a mission based game in which you played a role of a mighty pirate, who is on a quest of gold with his sidekick inky. It is the most competitive, addictive and fun game.

In this you can built a mountain of gold, fight battle against your Facebook friends and vice versa, and can also build your own territory.

8. Mafia Wars



It is the most interesting MMO social network game. In this, you can play as gangsters and build your own mafia.

In this, you have tasks to complete like fighting with other players, rob, complete assigned missions to gain rewards and strength. This is an endless experience of the Mafia. This game was also awarded **Webby Award People's Voice** winner in 2009.

9. ICC Pro Cricket 2015



It is an official World Cup ICC Cricket Video game. It is released by Indiagames, a local studio specialized in developing cricket games. The game has unique features for bowling and batting. It utilizes mechanics that traces the ball's trajectory on the screen to give you the live experience.

In this, the motion captures create a display to produce realistic graphics along with simulation and management gameplay.

10. Clash of Clans



Last and the most promising and the deserving name to be listed in top 10 online games in India the Clash of clans. I don't think that it is necessary to say about this game.

It is an MMO strategy video game. In this, the players create a community, troops and attack other players to earn elixir and gold. The player then with the earnings strengthens his defense and upgrade troops. It also supports feature of a single player campaign.

The above mentioned games are very popular in India, the people are downloading continuously and playing them. Young generation who have the facility of high speed internet connectivity and smartphones are having multiple options for downloading the games from Google play and other websites. Many games developing companies are making continuous effort to make the games more and more popular and make the people to play it. [14]

Volume -4, Issue- 3, Jun. 2017, ISSN: 2394 - 8124

Impact Factor: 4.564 (2015)



Website: www.jmeit.com | E-mail: editorjmeit@outlook.com|jmeit@outlook.com

VIII. SURVEY QUESTIONNAIRE

If we look at the graphic mentioned below, it gives the stats for three quarter results of Google Play in India from 2016 two quarters and 2017 first quarter from 16 million to 24 million downloads from India it is a very good indication, for game manufacturer and players this is due to increase in gaming tittle and 4G Internet connectivity, recently Reliance JIO has announced the 4G connectivity and this is one of the positive effect of the improved internet connectivity that there is an increase in downloading of the gaming titles.

Game On	^ ^
TOTAL DOWNLOADS OF TOP 10 GAMES ON IOS, GOOGLE PLAY IN INDIA	TIME SPENT ON TOP 10 GAMES ON AN- DROID SMARTPHONES
Quarter In millions 2016 Q3 11 2016 Q4 18	Quarter Total Time Top 10 (million hours) 2016 Q4 1,630 2017 Q1 2,120
Top Games in India by Combined Google Play and iOS Downloads - Jan to May	Subway Candy Surfer Crush

With the details mention above whether it is of high end mobile devices or millions of downloading gaming titles from the websites with the improved Internet connectivity, the researcher tried to focus the gaming industry with special reference to the smartphones and young generation of school and colleges the researcher floated a series of questionnaire to understand the details which are group and what are the factors influencing the gaming scenario. What kind of games do there young generation like to play, how much time they spend , how to they get information about new gaming title, etc.

This is the link to the online questionnaire: https://eSurv.org?u=Smartphone_Gaming

1. Please select the appropriate age gr	
O 12-15	O 16-18
O 19-25	O 26-30
2. Please select your gender	
O Male	○ Female
- maio	- Tomaio
3. Where do you study, please select	
	O C-11
○ School	○ College
4. Kindly select from the following opt mobile device	ions the choice of games do you wish to play, on your
☐ Role play	☐ Adventure
☐ Strategy	☐ Arcade
□ Puzzle	□ Dressing
5. According to you, which gaming de	vice you wish to prefer while playing games
□ PC	□ Smartphones
	Access to the contract of the
□ Gaming consoles	☐ T.V. gaming
☐ Tablet	
6. According to you, how long have yo	ou been playing games on smartphones / tablets
○ 1-6 months	○ 7-12 months
○ 1-2 yrs	○ 2 + yrs
7 4	
	ile phones for gaming how much time spend in a day
(only approximation). Kindly choose.	0.5.1
○ 1-2 hours / day	2-4 hours / day
 Whenever free 	Undecided / more than 2 hours
8. According to you, do you think that	mobile gaming has become a regular feature of my life
style, kindly choose	, ,
Strongly Agree	O Agree
Undecided	3
Undecided	O Disagree
9. According to you, when was the last	time ala you played any game on mobile /
smartphone device? Kindly choose	
30 minutes ago	1 hour ago
2 hour ago	More than 4 hour ago
e z nour ago	o more than 4 hour ago
10 According to you in terms of time	spent in comparison to gaming devices, you devote
10. According to you, in terms of time	
more time to play games on kindly ch	
more time to play games on, kindly ch	
O Pc gaming	t.v. gaming
Pc gaming smartphone gaming	t.v. gamingGaming consoles
 Pc gaming smartphone gaming According to you, what factors influence 	t.v. gaming
 Pc gaming smartphone gaming According to you, what factors inflikindly choose 	t.v. gamingGaming consoles uences to play on a mobile / smartphone device?
 Pc gaming smartphone gaming According to you, what factors influence 	t.v. gamingGaming consoles uences to play on a mobile / smartphone device?
Pc gaming martphone gaming 11. According to you, what factors inflicted yield choose New smartphones with better feature	 t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es <a>Improved internet connectivity
Pc gaming smartphone gaming 11. According to you, what factors inflikindly choose New smartphones with better feature Enough space in mobile games to p	t.v. gamingGaming consoles uences to play on a mobile / smartphone device?
Pc gaming martphone gaming 11. According to you, what factors inflicted yield choose New smartphones with better feature	 t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es <a>Improved internet connectivity
Pc gaming smartphone gaming 11. According to you, what factors inflikindly choose New smartphones with better feature Enough space in mobile games to p	 t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es <a>Improved internet connectivity
Pc gaming smartphone gaming 11. According to you, what factors inflikindly choose New smartphones with better featur Enough space in mobile games to p Mobility of smartphones	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity lay □ Freemium games [free to play up to certain stage]
Pc gaming smartphone gaming 11. According to you, what factors inflikindly choose New smartphones with better featur Enough space in mobile games to p Mobility of smartphones	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity lay □ Freemium games [free to play up to certain stage] to the increase in your mobile gaming experience?
Pc gaming smartphone gaming 11. According to you, what factors influxingly choose New smartphones with better featur Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity lay □ Freemium games [free to play up to certain stage] rd the increase in your mobile gaming experience? □ Smartphones with more memory
Pc gaming smartphone gaming 11. According to you, what factors inflikindly choose New smartphones with better feature Enough space in mobile games to perform Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and me	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity elay □ Freemium games [free to play up to certain stage] ed the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved
Pc gaming smartphone gaming 11. According to you, what factors influxingly choose New smartphones with better featur Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity elay □ Freemium games [free to play up to certain stage] ed the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved
Pc gaming smartphone gaming 11. According to you, what factors inflikindly choose New smartphones with better feature Enough space in mobile games to perform Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and me	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity elay □ Freemium games [free to play up to certain stage] ed the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved
Pc gaming smartphone gaming 11. According to you, what factors inflikindly choose New smartphones with better featur Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and m No. of gaming titles increased [more	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity elay □ Freemium games [free to play up to certain stage] and the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games]
Pc gaming smartphone gaming 11. According to you, what factors inflikingly choose New smartphones with better featur Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and m No. of gaming titles increased [mor	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity elay □ Freemium games [free to play up to certain stage] ed the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games]
Pc gaming smartphone gaming 11. According to you, what factors inflikindly choose New smartphones with better feature Enough space in mobile games to perform the smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and mere No. of gaming titles increased [more statement of the smartphone state	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity alay □ Freemium games [free to play up to certain stage] ed the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games] Jan to purchase / unlock games after playing the trial
Pc gaming smartphone gaming 11. According to you, what factors inflikingly choose New smartphones with better featur Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and m No. of gaming titles increased [mor	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity elay □ Freemium games [free to play up to certain stage] ed the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games]
Pc gaming smartphone gaming 11. According to you, what factors influxingly choose New smartphones with better featur Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and m No. of gaming titles increased [more 13. According to you, do you wish to p	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity lay □ Freemium games [free to play up to certain stage] and the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games] Idan to purchase / unlock games after playing the trial No
Pc gaming smartphone gaming 11. According to you, what factors inflikindly choose New smartphones with better feature Enough space in mobile games to perform the smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and mere No. of gaming titles increased [more statement of the smartphone state	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity alay □ Freemium games [free to play up to certain stage] ed the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games] Jan to purchase / unlock games after playing the trial
Pc gaming smartphone gaming 11. According to you, what factors inflikingly choose New smartphones with better featurence in the power of the power o	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity lay □ Freemium games [free to play up to certain stage] and the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games] Jan to purchase / unlock games after playing the trial ○ No uming experience with your current smartphone
Pc gaming smartphone gaming 11. According to you, what factors infliktingly choose New smartphones with better feature Enough space in mobile games to perform the performance of the p	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity lay □ Freemium games [free to play up to certain stage] and the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games] Idan to purchase / unlock games after playing the trial No
Pc gaming smartphone gaming 11. According to you, what factors inflikingly choose New smartphones with better featurence in the power of the power o	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity lay □ Freemium games [free to play up to certain stage] ed the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games] Jan to purchase / unlock games after playing the trial ○ No uming experience with your current smartphone
Pc gaming smartphone gaming 11. According to you, what factors infikindly choose New smartphones with better featurency Enough space in mobile games to possible games to possible games to possible games to possible games. 12. In your opinion, what has influence Freemium games Improved graphics in games and most possible games and most possible games. No. of gaming titles increased [more games] 13. According to you, do you wish to possible games. Yes 14. Do you have VR [Virtual Reality] games games. Yes Smartphone not VR Ready	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity lay □ Freemium games [free to play up to certain stage] and the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games] Interval to purchase / unlock games after playing the trial ○ No ming experience with your current smartphone ○ No
Pc gaming smartphone gaming 11. According to you, what factors infliktingly choose New smartphones with better feature Enough space in mobile games to perform the performance of the p	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity lay □ Freemium games [free to play up to certain stage] and the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games] Interval to purchase / unlock games after playing the trial ○ No ming experience with your current smartphone ○ No
Pc gaming smartphone gaming 11. According to you, what factors infikindly choose New smartphones with better featurency Enough space in mobile games to possible games to possible games to possible games to possible games. 12. In your opinion, what has influence Freemium games Improved graphics in games and most possible games and most possible games. No. of gaming titles increased [more games] 13. According to you, do you wish to possible games. Yes 14. Do you have VR [Virtual Reality] games games. Yes Smartphone not VR Ready	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity lay □ Freemium games [free to play up to certain stage] and the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games] Interval to purchase / unlock games after playing the trial ○ No ming experience with your current smartphone ○ No
Pc gaming smartphone gaming 11. According to you, what factors infik Kindly choose New smartphones with better featur Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and m No. of gaming titles increased [mor 13. According to you, do you wish to p version or freemium games. Yes 14. Do you have VR [Virtual Reality] ga device? Yes Smartphone not VR Ready 15. Kindly choose the source of inform Social media	t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es Improved internet connectivity day Freemium games [free to play up to certain stage] ed the increase in your mobile gaming experience? Smartphones with more memory obile devices
Pc gaming smartphone gaming 11. According to you, what factors inflikingly choose New smartphones with better feature Enough space in mobile games to possibility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and menory of gaming titles increased [more in the present of	t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es Improved internet connectivity lay Freemium games [free to play up to certain stage] od the increase in your mobile gaming experience? Smartphones with more memory obile devices Quality of games improved e choices of games] alan to purchase / unlock games after playing the trial No uming experience with your current smartphone No setion about the new game availability. Blogs Advertisements
Pc gaming smartphone gaming 11. According to you, what factors infik Kindly choose New smartphones with better featur Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and m No. of gaming titles increased [mor 13. According to you, do you wish to p version or freemium games. Yes 14. Do you have VR [Virtual Reality] ga device? Yes Smartphone not VR Ready 15. Kindly choose the source of inform Social media	○ t.v. gaming ○ Gaming consoles uences to play on a mobile / smartphone device? es □ Improved internet connectivity day □ Freemium games [free to play up to certain stage] ed the increase in your mobile gaming experience? □ Smartphones with more memory obile devices □ Quality of games improved e choices of games] Value
Pc gaming smartphone gaming 11. According to you, what factors infik Kindly choose New smartphones with better featur Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and me No. of gaming titles increased [mor 13. According to you, do you wish to p version or freemium games. Yes 14. Do you have VR [Virtual Reality] gadevice? Yes Smartphone not VR Ready 15. Kindly choose the source of inform Social media Youtube Stores / supermart/ shopping malls	t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es Improved internet connectivity day Freemium games [free to play up to certain stage] ed the increase in your mobile gaming experience?
Pc gaming smartphone gaming 11. According to you, what factors infikindly choose New smartphones with better featurence in the power of the power o	t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es Improved internet connectivity lay Freemium games [free to play up to certain stage] and the increase in your mobile gaming experience? Smartphones with more memory obile devices Quality of games improved e choices of games] And to purchase / unlock games after playing the trial No mining experience with your current smartphone No nation about the new game availability. Blogs Advertisements Peer groups ne titles which you have played.
Pc gaming smartphone gaming 11. According to you, what factors infikingly choose New smartphones with better feature Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and m No. of gaming titles increased [more smartphones of reemium games. Yes 13. According to you, do you wish to powers or freemium games. Yes 14. Do you have VR [Virtual Reality] gadevice? Yes Smartphone not VR Ready 15. Kindly choose the source of inform Social media Youtube Stores / supermart/ shopping malls 16. Kindly choose the smartphone gam Pokemon Go Temp	t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es Improved internet connectivity lay Freemium games [free to play up to certain stage] Ind the increase in your mobile gaming experience? Smartphones with more memory Smartphones with pour current smartphone No No No No No Smartphones with your current smartphone No No No No Smartphones with your current smartphone No No Smartphones with your current smartphone No No Smartphones with your current smartphone No Clash Royale Clash Royale
Pc gaming smartphone gaming 11. According to you, what factors infikindly choose New smartphones with better featurence in the power of the power o	t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es Improved internet connectivity lay Freemium games [free to play up to certain stage] Ind the increase in your mobile gaming experience? Smartphones with more memory Smartphones with pour current smartphone No No No No No Smartphones with your current smartphone No No No No Smartphones with your current smartphone No No Smartphones with your current smartphone No No Smartphones with your current smartphone No Clash Royale Clash Royale
Pc gaming smartphone gaming 11. According to you, what factors infik Kindly choose New smartphones with better featur Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and m No. of gaming titles increased [mor 13. According to you, do you wish to p version or freemium games. Yes 14. Do you have VR [Virtual Reality] gadevice? Yes Smartphone not VR Ready 15. Kindly choose the source of inform Social media Youtube Stores / supermart/ shopping malls 16. Kindly choose the smartphone gam Pokemon Go Temp Traffic Rider Teen	t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es Improved internet connectivity lay Freemium games [free to play up to certain stage] Ind the increase in your mobile gaming experience? Smartphones with more memory Smartphones with more memory Smartphones improved
Pc gaming smartphone gaming 11. According to you, what factors inflikingly choose New smartphones with better feature Enough space in mobile games to possibility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and menory of gaming titles increased [more improved graphics in games and menory of gaming titles increased [more improved graphics in games and menory of gaming titles increased [more improved graphics in games and menory of gaming titles increased [more improved graphics in games of games in games	t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es Improved internet connectivity lay Freemium games [free to play up to certain stage] od the increase in your mobile gaming experience? Smartphones with more memory bobile devices Quality of games improved e choices of games] olan to purchase / unlock games after playing the trial No Imming experience with your current smartphone No No setion about the new game availability. Blogs Advertisements Peer groups ne titles which you have played. le Run 2 Clash Royale Patti Slither.io vay Surfers Fruit Ninja
Pc gaming smartphone gaming 11. According to you, what factors infikindly choose New smartphones with better feature Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and me No. of gaming titles increased [more smartphone you, do you wish to persion or freemium games. Yes 14. Do you have VR [Virtual Reality] gadevice? Yes Smartphone not VR Ready 15. Kindly choose the source of inform Social media Youtube Stores / supermart/ shopping malls 16. Kindly choose the smartphone gam Pokemon Go Traffic Rider Teen Dream League Soccer Subw Clash Of Clans Can	t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es Improved internet connectivity lay Freemium games [free to play up to certain stage] and the increase in your mobile gaming experience? Smartphones with more memory No No No No No No Smartphones with more memory No No No No No No Smartphones with more memory No No No No No Smartphones with more memory No No No Smartphones with more memory No No Called No Smartphones with more memory No No Smartphones with more memory No No Smartphones with more memory No No Smartphones with more memory No No Smartphones with more memory No No Smartphones with more memory No No Smartphones with more memory No No Smartphones with more memory No No Smartphones with more memory No No Smartphones with more memory No No Smartphones with more memory No No Smartphones with more memory No No No Smartphones with more memory No No No Smartphones with more memory No No No No Smartphones with more memory No No No No Smartphones with more memory No No No No No No No No
Pc gaming smartphone gaming 11. According to you, what factors infikindly choose New smartphones with better feature Enough space in mobile games to p Mobility of smartphones 12. In your opinion, what has influence Freemium games Improved graphics in games and me No. of gaming titles increased [more smartphone you, do you wish to persion or freemium games. Yes 14. Do you have VR [Virtual Reality] gadevice? Yes Smartphone not VR Ready 15. Kindly choose the source of inform Social media Youtube Stores / supermart/ shopping malls 16. Kindly choose the smartphone gam Pokemon Go Traffic Rider Teen Dream League Soccer Subw Clash Of Clans Can	t.v. gaming Gaming consoles uences to play on a mobile / smartphone device? es Improved internet connectivity lay Freemium games [free to play up to certain stage] Ind the increase in your mobile gaming experience? Smartphones with more memory sobile devices Quality of games improved to choices of games] Idan to purchase / unlock games after playing the trial No No writing experience with your current smartphone No tation about the new game availability. Blogs Advertisements Peer groups the titles which you have played. the litles which you have played. Slither.io vay Surfers Fruit Ninja By Crush Saga 8 Ball Pool Ble Army 2 Pacman

IX. DATA ANALYSIS AND INTERPRETATION

The data collected from the online floated questionnaire to understand the Indian gaming industry and the young generation who are from schools and colleges. They are the potential buyers and players of the games which gaming companies are manufacturing.



Volume -4, Issue- 3, Jun. 2017, ISSN: 2394 - 8124



The data collected as a result from the online questionnaire the maximum respondent from the age group of 16-18 years and rest of them are from 19-25 and 26-30 years. As per the gender ratio there are more female respondents in this survey. As per the third question the school respondents are more than college respondents as they have more time then college going students. The response from the respondent in question about the genre of the games which they would like to play the results shows that the Role Play, Strategy and Puzzle are their favorite, in terms of their favorite gaming device PC and smartphones are their choice, most of them are busy in playing games from 1-2 years this depicts that they are regular users and hiving good experience on the various gaming titles. The respondent gives genuine response to the question how much time they give to the gaming, they paly whenever they are free there is no fixed time to play games on smartphone and this has become a regular feature in their life style. Every gamer responded that they played the last game thirty minutes ago, this gives the reflection either whenever they are free phenomenon is working here as they got the time they start playing or they are switching to the new game title as the game title retention rate is very low may be due to the high gaming titles available and there are multiple

10) According to you, in terms of time spent in comparison to gaming devices, you devote more time

11) According to you, what factors influences to play on a mobile / smartphone device? Kindly choose

Pc gaming

t.v. gaming

smartphone gaming

Improved internet connectivity Enough space in mobile games to play

Mobility of smartphones

Freemium games [free to play up to

Volume -4, Issue- 3, Jun. 2017, ISSN: 2394 - 8124

Impact Factor: 4.564 (2015)

Website: www.jmeit.com | E-mail: editorjmeit@outlook.com|jmeit@outlook.com



choices available for the gamers. The response to the question about influencing factors for the people to play games on the mobiles they opt the options like, new smartphones with better features, improved internet connectivity, Freemium games, number of gaming titles are increasing with improved graphics and quality. Amazingly the maximum people are not planning to purchase "freemium games" this could be another reason for opting other gaming title once they have the finished the stages of free product they move on to the free product, as the Indian market is very price sensitive. In terms of VR [Virtual Reality] gaming experience the respondents are not having the experience most of them, some stated that their mobile device is not VR ready, as the mobile device and the VR equipment are at the higher price and at the stage of our respondents not many of them can afford to have them. The information about the new gaming titles and other relevant information is speeded through social media, YouTube and peer groups as the young generation is very active on these media and the information is very fast spreading on these medium. When the respondents are asked about the games played, most of them have played all the games listed there, the point to be ponder here is that all the games are played, almost equally and the respondents are aware of the games title here. As there is a continuous increase in the gaming title day by day, "gamer retention" is very low, as every day there is a new game and there are multiple gaming options available.

X. CONCLUSION

To conclude the research paper, this is a beginning to identify the new growing market of young player from school and colleges and India is having maximum younger generation in the world. The potential customer to the gaming industry is very energetic and putting their time to play the games on their smartphone devices the survey questions gives some reflections about the gaming practices and choices and preferences as there is continuous increase in the gaming titles and the potential customers in India and it is becoming the one of the biggest market in the world in this multi-million dollar gaming industry. Due to the high gaming titles available and there are multiple choices available for the gamers the traditional brands like Dettol, ITC, Gems, and many others are using the platform to show native in-game ads and pumping a large amount of money to this industry.

The influencing factors for the people to play games on the mobiles they opt the options like, new smartphones with better features, improved internet connectivity, Freemium games, number of gaming titles are increasing with improved graphics and quality. People are playing games whenever they are free, smartphones are giving freedom of mobility and due to improved internet connectivity and introductory "FREE" 4G Internet from Reliance Jio has also boosted the Internet usage on mobile devices that includes the free gaming and movie downloads.

This research paper is the starting point for the new research area to identifying the new growing area of Indian gaming industry, the young generation of school and colleges are well equipped with the Fast Internet connectivity and smartphones designed for gaming, virtual reality and other technology updates are yet to come in its full picture. It all starts from NOKIA's black and white snake game to the latest online and virtual games this drastic development need to be viewed under the light of research by narrowing the fields like games dedicated to the "female" only or games for the preschoolers etc., the researchers is planning to go further deep in the research to identifying the real motivator for playing the games in near future.

REFERENCES

- $[1] \ https://en.wikipedia.org/wiki/Video_game_industry\#Overview$
- [2] http://www.deccanchronicle.com/technology/in-other-news/050217/indias-mobile-gaming-market-to-cross-400mn-by-2022-report.html
- [3]https://yourstory.com/2016/12/2016-indian-gaming-industry/
- [4] http://info.moravia.com/blog/the-coming-of-age-of-the-indian-mobile-gaming-market
- [5]http://www.rncos.com/Market-Analysis-Reports/India-Mobile-Gaming-Analysis-IM288.htm
- [6] http://www.gamingshow.in/gamingindustry.php
- [7] https://www.franchiseindia.com/entrepreneur/article/starting-up/business-opportunity/How-gaming-industry-is-shaping-up-in-India-594/
- [8] https://yourstory.com/2016/12/2016-indian-gaming-industry/ [9]http://economictimes.indiatimes.com/tech/internet/indias-mobile-gaming-market-214-million/articleshow/52441925.cms [10]
- http://economictimes.indiatimes.com/articleshow/59245911.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst [11] Read more at:
- $\label{lem:http://economictimes.indiatimes.com/articleshow/52138461.cms? utm_source=contentofinterest\&utm_medium=text\&utm_campaign=cppst$
- $[12]\ https://hbr.org/2012/04/the-mobile-re-generation$
- [13] http://www.digit.in/top-products/best-mobile-phones-for-gaming-178.html
- [14] https://www.pc-tablet.co.in/top-ten-smartphone-online-games-play-india/14066/