DOI : 10.18843/ijms/v5i3(2)/09
DOIURL :http://dx.doi.org/10.18843/ijms/v5i3(2)/09

Impact of Video and Computer Gaming on Students in Goa: An Empirical Study

Pravin D. Sawant,

Assistant Professor,
Narayan Zantye College of Commerce
Bicholim Goa, India.

ABSTRACT

The gaming industry has gone through significant technological change, high growth rates, and new product development. Gaming has become lucrative business, especially during the last decade and industry has captured the techno savvy children in their net, The top 10 gaming companies now have combined revenue of more than $24 bn, and the market is estimated to be worth of $50 bn. Despite the economic crisis, the online gaming segment is still booming, resulting in fast growth of the leading companies in the market.
Majority of the video gamers are youth in the age of 14 to 24 years. Racing type of games is mostly desired by local gamers followed by fighting game genre. Games requiring IQ application are least favourite. The Survey concludes that there is a very high degree of correlation between the Duration of playing video games by the respondents and the Companionship during Video gaming.

Keywords: Video Games, Computer Games, Mobile Games, Economic crisis.

INTRODUCTION:

Video, Computer Gaming and Mobile Gaming has become a part of kids' life and it became finger tip job. First generation video game players have now become adult and carry their passion to adulthood. The video game industry has witnessed significant growth and now the computer gaming via internet. Video, computer games has captured a wide market, and now has huge opportunities for capital investments. Over the decades, the gaming industry has gone through significant technological change, high growth rates, and new product development. There are many gaming companies in the International market engaged in designing, developing & distributing video game's hardware and software, highlighting games on computers through internet by charging fees but it is seen that there is no clear market leader. Gaming has become lucrative business, especially during the last decade and industry has captured the techno savvy children in their net.
The top 10 gaming companies now have combined revenue of more than $24 bn, and the market is estimated to be worth of $50 bn. Despite the economic crisis, the online gaming segment is still booming, resulting in fast growth of the leading companies in the market.

LITERATURE REVIEW:

Christopher J. Ferguson (2009), The impact of violent video games on youth and adults who play these games has been a source of great controversy for years. This paper reviews the research on violent video games across three main areas: general effects on aggression, negative effects on specific high-risk populations, and effects on visuospatial cognition.
Greitemeyer & Osswald (2010), researchers set out to see if there are always negative social outcomes to playing video games. In particular, they wanted to examine if playing games with prosocial content could led to promoting prosocial or helping behavior. In their first experiment they wanted to see how participants responded to spontaneous un-requested assistance, picking up spilled pencils, after playing either a prosocial,

neutral, or violent video game. It was predicted that the prosocial gamers would be more likely to assist in picking up the pencils then the violent video game players. They had 54 students ages 19-43 years old randomly assigned to play one of the three game conditions for 8 minutes.

A British study found that those aged under 16 years rank playing videogames as their most popular entertainment form (Pratchett, 2005), whilst US studies have reported similar findings with time spent playing games continuing to increase for both children and adolescents (Anderson, Gentile & Buckley, 2007; Escobar-Chaves & Anderson, 2008; Gentile & Anderson, 2003). In Ireland, research has indicated that over half of nine-year old girls were recorded as playing videogames on an average weekday, compared with only 25% of boys. Almost 30% of boys (compared with 12% of girls) were reported as spending one or more hours daily playing these games (Williams et al., 2009).

Rochelle Cade, Jasper Gates (2016), Gamers are a growing population and video game culture remains unfamiliar to the majority of counselors. Little scholarship exists that would aid counselors in gaining awareness and knowledge about gamers and video game culture. Such information has implications for counselors to better meet the needs of gamers, their partners, and families seeking counseling. The authors discuss elements of gaming culture including a brief history, population characteristics, terminology, healthy and unhealthy gaming, and implications for counselors.

Video games show a decline in school performance and they take time away from their families. Actually if played as a family, video games can become a fun bonding activity. For example, it gives a chance for the child to "lead the way"(Shatzkin, 2005) and show their parent/guarding how to play.

Games can be used for learning as well, at home or in the classroom. One of the many hidden skills in video games is problem solving skills. The child will want to solve the problem in the game because it interests them more than a boring story problem at school. Games also enable the development of different learning styles, since speed and level difficulty can be adjusted according to the players (Jenkins, 2002)

Jack Hollingdale , Tobias Greitemeyer (2014),The results identified that participants who played a violent video game exhibited more aggression than those who played a neutral video game. Furthermore, this main effect was not particularly pronounced when the game was played online These findings suggest that both playing violent video games online and offline compared to playing neutral video games increases aggression

OBJECTIVES OF THE STUDY:

The main objectives of the study are:

- To analyse the video gaming preferences of Students in Goa
- To Assess the Impact of video games on Academic performance of Students in Goa.
- To Evaluate the satisfaction level of Students with the gaming services available in Goa.

ANALYSIS OF VIDEO GAMERS AND COMPUTER GAMERS:

This investigation is based on feedback from randomly allotted to local gamers.

Table No 1: Showing Age Groups of Gamers

Age Groups of Gamers	Respondents %
4-13	12(8%)
14-24	126(84%)
25-34	12(8%)
35-44	0
Total	**100%**

Source: Primary

From the above Table we can say that:

12 Respondents (8%) are in the age between 4 year and 13 years. Similarly, another set of 12 Respondents (8%) are between the age of 25 and 34 years. 126 Respondents (84%) fall in the age from 14 years up to 24 years. From this we can say that, majority of the video gamers are youth in the age of 14 to 24 years.

Table No 2: Showing Gender of the Gamers

Gender of the Gamers	Respondents%
Boys	131(87%)
Girls	19(13%)
Total	**100**

Source: Primary.

From the above Table we can say that:
131 Respondents (87%) are male in gender, whereas, only 19 Respondents (13%) are female by gender.
It can be concluded that a large majority of video gaming customers are boys/ men.

Table No 3: Showing Location of Playing Video Games

Location of Playing Video Games	Respondents
Computer Stations/Cyber Cafe	34
At friends or Relatives Place	15
At my Home	101
Total	**150**

Source: Primary.

Above Table indicates that:
101 Respondents play games at home. 15 Respondents play video games at friend's or relative's place. 34 Respondents play games in Video Gaming Cafes.
It is observed that there is a large amount of video gaming taking place at home followed by gaming parlors.

Table No 4: Showing Duration (in Hours) of Playing Video Games

Duration (in Hours) of Playing Video Games	Respondents
0-2 Hours per day	84
3-4 Hours per day	58
5-6 Hours per day	08
7-8 Hours per day	00
Total	**150**

Source: Primary

Based on the above figure concerning time spend to play video games, it is concluded that:
Majority of 84 Respondents play games for maximum 2 hours per day and maximum 15 hours per week. 58 Respondents play games for 3 to 4 hours per day and 16 to 30 hours per week. Very few, i.e., only 08 Respondents play games for 5 to 6 hours per day and/ or 31 to 45 hours per week.
We can say that gamers, on an average devote minimum suggested time in video games.

Table No 5: Showing Annual Budget Reserved for Video Gaming

Annual Budget Reserved for Video Gaming	Respondents
Below Rs. 1000	99
Rs.1001-5000	31
Rs.5001-10000	15
Rs.10001-20000	03
Rs.20001 and above	02
Total	150

Source: Primary.

99 Respondents spend below `1,000/- for video gaming annually. 30 Respondents spend between `1,001/- up to `5000/- and 15 Respondents spend between `5,001/- to `10000/- .Only 3 Respondents spend `10,001/- to `20000/- and 2 Respondents spend above `20,001/-
Large chunk of gamers spend least amount of Rs.1000 ` for video gaming annually.

Table No 6: Showing Companionship during Video Gaming

Companionship during Video Gaming	Respondents
Multi Players with other players over the internet	20
Multi Players with Family /friends	59
I play alone	71
Total	**150**

Source: Primary.

From the above Table, it is seen that:
71 Respondents play video games alone, whereas, 59 Respondents play video games in multiplayer mode with family, friends or parents. A few numbers of Respondents, i.e., 20 play games with other gamers over the Internet. Most video gamers either play alone or with friends/ relatives locally.

Table No 7: Showing Source of Purchasing Video Games

Source of Purchasing Video Games	Respondents
Disc from purchase stores	18
Purchase online using credit cards	11
Borrowed from friends	51
I download via internet	68
Any other	02
Total	**150**

Source: Primary

Maximum of 68 Respondents do not buy Video games but download through Internet and 51 Respondents borrow from friends instead of purchasing them.
Very few, i.e., 11 Respondents buy through Internet using credit card mechanism, whereas, 18 Respondents purchase disc from retail stores. Only 2 Respondents purchase video games from other sources like stream and online shopping sites.
Here, majority of gamers acquire gaming content from illegal sources.

Table No 8: Showing Preference of Video Game Genre (Type)

Preference of Video Game Genre (Type)	Respondents
Strategy	16
Simulation	6
Racing	47
Action (Fighting)	28
Sports and Puzzles	23
Role playing	7
Shooter	22
Any other	1
Total	**150**

Source: Primary

On questioning about their preference over video game Genre (type), A maximum of 47 Respondents said they preferred racing games and 28Respondents said they preferred fighting games. Shooter types of games were preferred by 22Respondents and 23 Respondents preferred games of sports and puzzle type. 16 gamers chose strategy games. 9 Respondents and 8 Respondents favored Role Playing games and Stimulation games respectively. Only 1 respondent said he liked other type of games such as RPG games.
Racing type of games is mostly desired by local gamers followed by fighting game genre. Games requiring IQ application are least favourite.

Table No 9: Showing Addiction Levels over Video Gaming [

Addiction Levels Over Video Gaming	Respondents%
Yes	83(55%)
No	67(45%)
Total	**150**

Source: Primary

55% Respondents said they were addicted to video game playing, whereas, 45% said they were not addicted to video gaming. From this, we can say that, there is a mixed response about addictiveness over video gaming where only average numbers of Respondents (83) are fanatic about video gaming & others (67) are not obsessive about gaming.

Table No 10: Showing Academic Performance of Video Gamers

Academic Performance of Video Gamers	Respondents %
I am below average (40% to 49% marks	9(6%)
I am average (50% to 59% grade)	63(42%)
I am above average (60% to 69%)	54(36%)
I am outstanding (70% and above)	24(16%)
Total	**150**

Source: Primary

On asking about the gamers' Academic performance, 63 Respondents said they were average in studies, scoring 50% to 59% marks and 54 Respondents said they were above average (securing 60% to 69%). 24 Respondents declared themselves as outstanding academic performers scoring 70% and above. Only 9 respondents said they were below average in learning (in range of 40% to 49%).
Most of the video games are just below average and just above average in studies and schoolwork related activities. Least numbers are brilliant.

Table No 11: Showing Gains/Values acquired through Video Games

Gains/Values acquired through Video Games	Respondents
I can do certain things virtually which I cannot do physically or in reality	12
It derives mental satisfaction	17
It is a source of education	18
It is a source of entertainment	59
No gains, I only play as I am habitual to video gaming	24
No personal gains and values, I play Because my friends/ siblings insist to…	19
Any other	01
Total	**150**

Source: Primary

A maximum of 59 Respondents said that video games were a source of entertainment to them. 24 Respondents said that video games do not provide any gains but they only play as they are habitual to playing video games. 17respondents said that video games derive them mental satisfaction. 19respondents said that they do not gain any values out of video gaming but play because friends and siblings insist to play. 18 respondents believe that video games are a source of education. Only 12 respondents said they play games because they can do certain things virtually which cannot be done physically or in reality. 1 respondent gave reason for playing video games saying that it improves application of brains.
From above, we can say that, majority of gamers consider video games as a source of entertainment and very few consider them as a source of education. Local gamers can be called as casual gamers and not hardcore.

Table No 12: Showing Satisfaction Level over Marketing Adopted by Video Gaming Industries

Satisfaction Level Over Marketing Adopted by Video Gaming Industries	Respondents
Satisfied	39
Average	75
Dissatisfied,	36
Total	**150**

Source: Primary

75 Respondents said they were moderately satisfied about the marketing aspects undertaken for video gaming products in India. 39 respondents thought they were highly satisfied and 36 respondents were dissatisfied over marketing strategies and policies adopted by Indian video gaming firms.
Here, we can propose that the local gamers are neither highly satisfied nor dissatisfied over marketing procedures and tactics used by video game companies. There is a sufficient scope for improvements.

HYPOTHESIS:

H0= There is no correlation between Duration of Playing Video Games and Companionship during Video Gaming
H1= There is correlation between Duration of Playing Video Games and Companionship during Video Gaming

Descriptive Statistics

	Mean	Std. Deviation	N
Duration of playing video games	1.4933	.59918	150
Companionship during Video gaming	2.3400	.70311	150

Correlations

		Duration of playing video games	Companionship during video gaming
Duration of playing video games	Pearson Correlation	1	-.018
	Sig. (2-tailed)		.822
	N	150	150
Companionship during Video gaming	Pearson Correlation	-.018	1
	Sig. (2-tailed)	.822	
	N	150	150

The Value of r=0.822 indicates that there is a very high degree of correlation between the Duration of playing video games by the respondents and the Companionship during Video gaming
H0= There is no difference in the Age of the Gamers preferring the different locations to play the video games
H1= There is Significant difference in the Age of the Gamers preferring the different locations to play the video games

One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	99% Confidence Interval of the Difference	
					Lower	Upper
Age of Respondents	61.033	149	.000	2.00000	1.9145	2.0855
Location of playing video games	35.683	149	.000	2.44667	2.2678	2.6256

The test result gives the t-Statistics of 61.03 with 149 degree of freedom. The corresponding two tailed p value is 0.000. The significance level of 1% and the p value obtained is less than 0.01.Therefore we reject the null hypothesis at a=0.01 which means that the sample mean is significantly different from the hypothesized value and the Age of the respondents Differs While preferring the different locations to play the video games.

CONCLUSION:

The gaming industry has shown rapid growth in the past, and it is expected to keep growing faster than the software and entertainment industry average. As the world population grows richer, increasingly more money is available for entertainment, which provides a good amount of revenue for the gaming industry.

The video game industry is targeting middle and upper classes in India. Here, setting a reasonable price is important. The Indian gaming firms must reconsider the pricing policies adopted by them. Game publishers need to have a different pricing strategy for Indian customers as they are price conscious..

Personal Computers, which serve as the core hardware for much of today's online and offline gaming, is an advanced and highly competitive and capital intensive industry, because much of the gaming culture exists in this segment in comparison to console gaming or mobile gaming. Therefore, due consideration must also be given to manufacturing and marketing of PC compatible games and accessories.

As largest segment of video gamers come from the age groups below 18 years, they are influenced by their parents on matters concerning video games and devices. Parents are hesitant of buying video game stuff for their kids due to the amount of violence they instill and time utilized in the non-constructive activity.

The Indian video gaming industry's standards and quality is not at par with the International (USA's) gaming standards. Most of the games played by Indians are designed, developed and engineered abroad. They are imported and released in the Indian markets by publishers who lock certain content of the game to suit Indian cultural values. The industry players must make efforts to release games maintaining international content and quality. This will encourage domestic purchases and discourage Indian money flowing out of the economy.

There is a very high degree of correlation between the Duration of playing video games by the respondents and the Companionship during Video gaming. and the Age of the respondents Differs while preferring the different locations to play the video games.

REFERENCES:

Jack Hollingdale, Tobias Greitemeyer (2014). *The Effect of Online Violent Video Games on Levels of Aggression*, wiley online library

Christopher J. Ferguson (2009). *Research on the Effects of Violent Video Games: A Critical Analysis*, 27 May 2009 wiley online library.

Jenkins, H. (2002). Game theory. *Techonlogy Review*, 1-3

Rochelle Cade, Jasper Gates (2016). *Gamers and Video Game Culture An Introduction for Counselors*, First Published November 24, 2016

Greitemeyer, T., &Osswald, S. (2010). Effects of prosocial video games on prosocial behavior. *Journal of Personality and Social Psychology*, 98, 211-221.

Shatzkin, K. (2005, August 26). *some video games have a positive side*. Retrieved November 6, 2009, from www.nashuatelegraph.com.

Anderson, C. A., Gentile, D. A., & Buckley, K. E. (2007). *Violent video game effects on children and adolescents: Theory, research, and public policy*. New York: Oxford University Press.

Escobar-Chaves, S. L. & Anderson, C. A. (2008). Media and risky behaviour. *Future of Children*, 18, 147-180.

Pratchett, R. (2005). GDigital play, digital lifestyles. Available from http://open.bbc.co.uk/newmediaresearch/files/BBC_UK_Games_Research_2005.pdf

Williams, J., Greene, S., Doyle, E., Harris, E., Layte, R., McCoy, S., McCrory, C., Murray, A., Nixon, E., O'Dowd, T., O'Moore, M., Quail, A., Smyth, E., Swords, L. & Thornton, M. (2009). *Growing up in Ireland: The lives of 9 year olds*. Dublin: The Office of Minister for Health and Children.
