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# Effect of electronic game contents on study habit of elementary school students

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## Abstract

This study examines whether the content of electronic games affects the study habits of students or not? Descriptive survey was adopted in the present study. Sample for the present study consisted of 1346 boys students from Ranchi city of Jharkhand studying in class VIII of CBSE, ICSE and Jharkhand Board. Two tools were used in the present study, in the absence of appropriate tool investigator herself designed one tool named "Electronic Games questionnaire (EGQ)". Another tool "Study Habit Inventory (SHI)" was constructed and standardized by Dr. B. V. Patel which was adopted for the purpose. The main objective of the study was to find out the significance of difference in the mean study habits scores of students playing violent and non-violente-games.The findings of the study shows those non-violent electronic games are away from distracting violent content of the e-games. Non-violent e-games are generally strategy based game full of tricks and healthy competitions. It was found that overall study habits of students playing non-violent electronic games were good in comparison to students playing violent electronic games.

**Keywords**: Electronic Games, Violent e-games, Non-violent e-games, Study Habits.

## Introduction

For our development as full-fledged human beings, the body is as much important as the mind. The ideal of a good and perfect life is to have a sound mind in a sound body. Games and sports are considered indispensable elements that foster these noble virtues. They are so important because they unite physical values with mental recreation. Games and sports are diversion from routine of work. Games and sports cultivate many virtues. They keep the body fit and active and the mind alert. They refresh the mind shaping the body at the same time. As there is physical value of games and sports, there are their moral values. They build up our character. They develop courage and patience in us. They promote team spirit, so they instil discipline, co-operation and selfless devotion to the team. The best place for children to practice physical activity is outside, yet nowadays most Indian children play indoors. The same children often

spend inordinate hours every day using a phone, sitting in front of a computer or video game console. In the last few decades, many childhood activities have moved inside the house. With continuing in technological advancements and indoor entertainment options, children are spending substantial amounts of time in the comfort of their homes, missing out on vital outdoor activity. It is easy to see that electronic games (e-games) form an integral part of modern life and, hence, have deep impact in the lives of their users.

**Electronic Games**

Electronic games are any interactive game operated by computer circuitry. In essence, electronic games employ electronics to create an interactive system with which a player can play. Being the most common form of electronic games today, video games are synonymous with electronic games. Video games utilize a video device to display visual feedback generated by interaction with a user interface. Electronic games of today are among the most demanding applications to run on computer hardware. The demand for high-end computer components that can run the latest cutting-edge games is ever increasing. Audiences for e-games of today are also changing. From being a curiosity of academics in the very early stages, to being a favourite pastime of children of all ages especially adolescence, electronic games now invite a much wider demographic. E-games can be exciting, fun, frustrating, exhilarating and boring. Today's e-games require the player to pay constant attention to the game and be completely immersed in it, rather than passively watch it like a movie. Nowadays e-games are more appreciated by children and youth because they provide instant rewards (e.g. points, promotion to the next level of game) to the player for their action in the game and they are characterized by enhanced realism in graphics and sound, combined with even more extreme violent action.

**Study Habits**

Study habits, refers to learning which leads to the achievement of a learner's goal, through a prescribed pattern of steady behaviour. Effective study habits refer to a situation in which a learner studies regularly to achieve maximum success in his school work. Devotion of large number of hours to e-gaming may hamper the study habits of adolescents. Some possible problems include less time spent on homework, less interest in studies and fetching lower grades in schools which contribute to poor study habits. Generally, high academic performance has been attributed to student's effective study habits. Studying is a skill, being successful in school requires a high level of study skills. Students must first learn these skills, practice them and develop effective study habits in order to be successful. Good study habits include many different study skills: home environment and planning, reading and note taking, planning of subjects, concentration, preparation for examinations, school environment. Most of the things we learn in life do not come from books and classroom. Apart from entertainment value, e-games also affect the student's habits, which affect their academic performance. The amount of e-game play can have significant effects on learning, both positive and negative. E-games are great for relaxation, but might be detrimental to studying. Playing e-games requires full attention, so any attempts to focus on other activities are greatly reduced. The problem that contributes the most to students' poor performance in tests and examinations is the lack of proper study habits. Time limits and age-appropriate e-games can reduce the chance of developing poor study habits. Talking to children about boundaries, time limits and appropriate content can help them form and maintain good study habits. The responsibility for developing good study habits is an equal responsibility of students, parents and teachers.

## Rationale of the Study

E-games have been, from a long time, seen as one of the most popular sources of entertainment among all age-group particularly the students in adolescent age, thus making it worthy of research in education. In the last decade it has become a favourite pastime for students and an integral part of modern lives. As electronic games are played more in homes and cyber cafes, parents, teachers and educators are very much concerned about the various possible impacts on children. To have a good and appropriate study habits is one of the factors for academic success. Apart from school hours and extra-curricular activities performed by school students, they should devote sufficient time to self-study.But in the very busy schedule of school students, instead of concentrating on self-study, they turn to playing e-games. There is an urge among the e-game players to win the game at least once, as a result they spend more time on e-games which hampers the schedule of their routine works. This affects the school going students more as their study time is used for playing e-games. This leads to less time for homework (Weaver *et al*, 2013 and Gentile, *et al* 2011); less interest in studies and fetching low grades in examination (Lieberman et al., 1988) which in turn contribute to poor study habits. Hence it is important to investigate the study habits of the students playing e-games. This study will help to bring awareness and provide a better understanding related to study habits in school going children.

## Objectives of the Study

1. To estimate the percentage of students playing e-games in terms of
    a. Number of hours in one sitting.
    b. Number of years played.
2. To study the study habits of students playing violent and non-violent e-games.
3. To find out the significance of difference in the mean study habits scores of students playing violent and non-violent e-games.

## Methodology

Descriptive survey method was followed in the undertaken study. The population of this study consisted of all male students from Ranchi and Bokaro city of Jharkhand studying in class VIII of CBSE, ICSE and Jharkhand Board of any schools, who play different types of e-games. Sample for the present study consisted of 1346 boys students from Ranchi city of Jharkhand studying in class VIII of CBSE, ICSE and Jharkhand Board.

### *The tools used for data collection*

a) Electronic Games questionnaire (EGQ)- Self developed. Test-retest method was employed for reliability of measure of e-game playing behaviour. The reliability of EGQ was 0.91. Content validity of the tool was established by three experts in the field of electronic games and six experienced faculty members of Education serving in Banaras Hindu University, Varanasi. The final form of questionnaire consisted of 14 items in part A and 26 items in part B.

b) Study Habit Inventory (SHI)- of Patel (NA).. The reliability of the inventory established by test-retest method and split-half method were found to be 0.79 and 0.82 respectively. The validity was established by using external criteria. Here, scores on the study habits inventory were correlated with the teachers' opinion and examination marks which were sufficiently high.

## The Findings

***Objective 1.a****:* To estimate the percentage of students playing e-games in terms of number of hours in one sitting.

***Findings pertaining to objective 1.a****:* Number of hours in one sitting.

(i) Excluding exam days

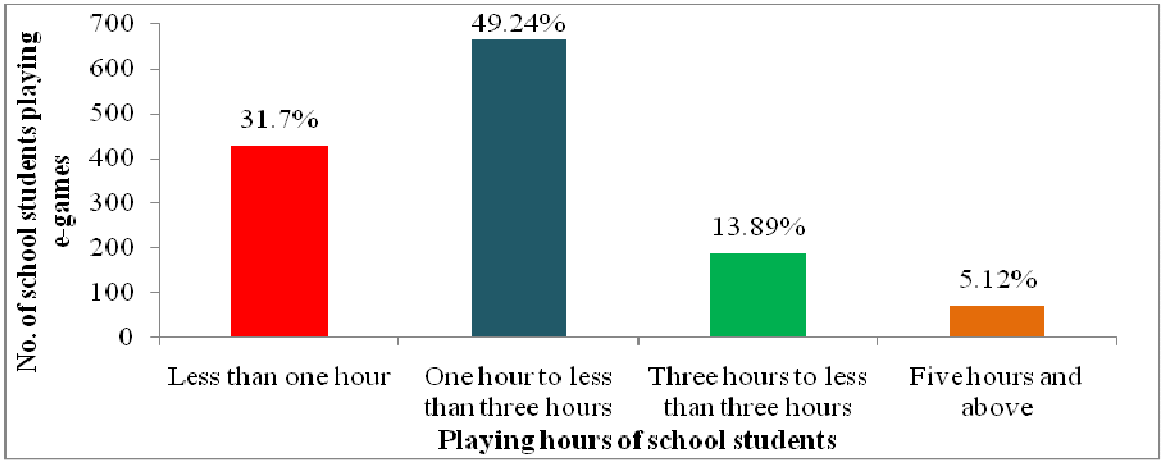


*Figure 1:* Students Playing E-Games in One Sitting (Excluding Exam Days)

(ii) During exam days

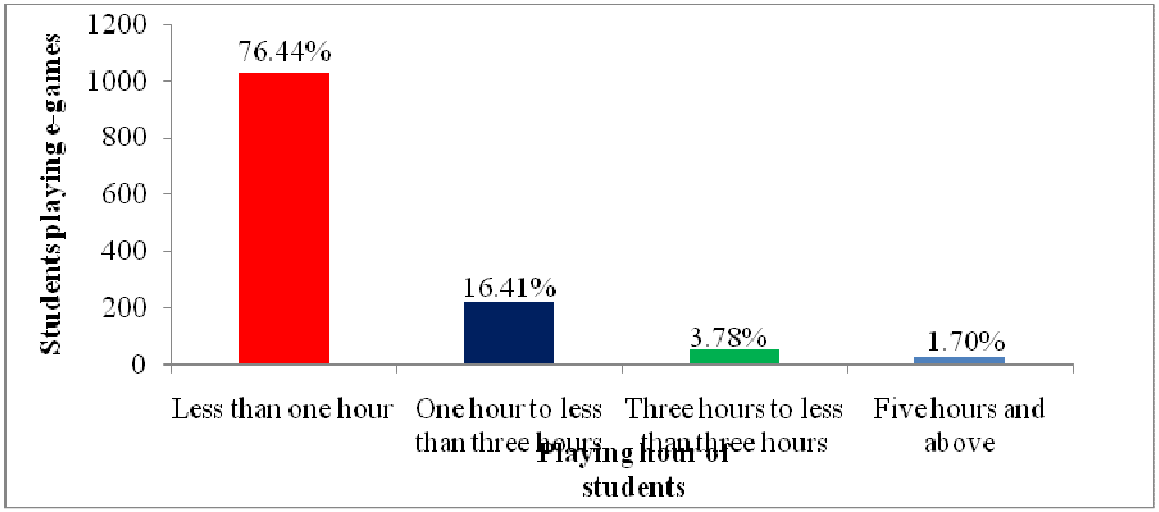


*Figure 2:* Students Playing E-Games in One Sitting (including exam days)

During the school days when exams were not held, 427 (31.72%) students devoted less than one hour, 663 (49.24%) students devoted 'one hour to less than three hours', 187 (13.89%) of students devoted 'three hours to less than five hours' and (69) 5.12% of students devoted 'five hours and above' to e-gaming.

During exam days (1029)76.44% of students were devoting 'less than one hour', (221) 16.41% of students were devoting 'one hour to less than three hours', (51) 3.78% were devoting 'three hours to less than five hours' and (23)1.70% of students were giving almost 'five hours and above' to e-gaming. The percentage of students not playing any e-games during exam days were 1.63%.

***Objective 1.b:*** *To* estimate the percentage of students playing e-games in terms of number of years played.

***Findings pertaining to objective 1.b****:* Number of years played.

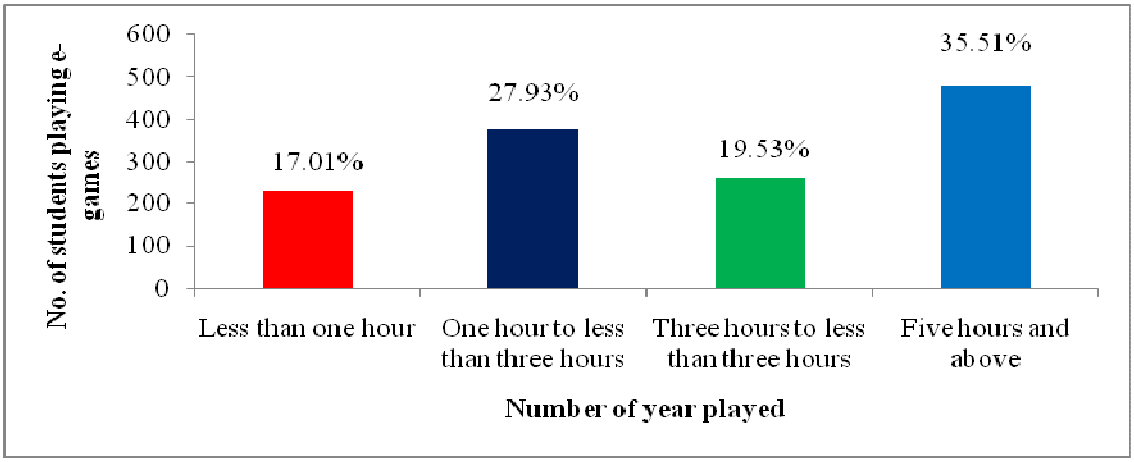


*Figure 3:* Students Playing E-Games for Number of Years

In terms of number of years played by students, it is seen in fig 3 that (229) 17.01% of students were playing for 'less than one year', (376) 27.93% of students were playing for 'one year to less than three years, (263)19.53% of students were playing for 'three years to less than five years', and (478) 35.51% of students were playing for 'five years and above'.

**Discussion**

From the finding of objective 1.a, it can be observed that almost 50% of the participants were spending 'one hour to less than three hours' during their one time sitting. It has been concluded that students invest most of their leisure hours in playing e-games. Excluding school hours, routine activities, rest and sleep or any extracurricular activity, Indian student is left with 3 hours of leisure time on an average. Most of the students were spending upto 3 hours for e-gaming. This is also corroborated by the finding of Lin and Lepper (1997) and Funk (1992) who concluded that playing video games would be at the cost of their leisure activities. The percentage of such students who devote more than leisure hours that is 3 hours is 19.01%. Those who are spending 3 hours and above might be displacing other important activity from their daily routine such as study hours or rest and sleep. For such students it may be very hard to engage themselves in other fruitful activities like reading, playing outside and social involvement. Study conducted by Veerman, 2011 concluded that sitting for more number of hours may be associated with risk for development of attention problem, learning difficulties and adverse long term educational outcomes. In another study by Liberman *et al* (1974) found that children who used computers to play games frequently performed more poorly in school. Another study conducted by Selnow (1984) concluded that videogame players perceive the game as a surrogate companion, as their electronic friend. Because of this one can expect that children who spend much time playing e-games will be less socially integrated. In other study Griffiths (2010) found that individuals who play more computer games lower their incident rate of engaging in social behaviour with peers. According to Padilla-Walker, et. al. 2009, children who play video games have high levels of drug use, alcohol drinking and poorer relationships with friends and family. Each hour a child spends playing electronic games is an

hour not spent on homework, reading, exploring, creating, social interaction or other things that might have educational or social benefits.

The present finding also revealed that more than majority of students were playing e-games during their exam days too. It was found that only 1.63% of the students were not playing electronic games during their exam days. Almost three-fourth, 76.44% of students reported they were playing for at least one hour during their exam days. It was found that 16.41% of the total students were playing for 'one hour to three hours'. One of the reasons may be that they play during their exam just for the sake of recreation, which may increase their work efficiency in studies. It was also well said by Feshbach & Singer (1971) that video games have a relaxing effect.

Fig 3 reveals that only 17.01% of the students are having playing experience for at least 'less than one year'. Most of the students were playing above one year. Large numbers of students (27.93%) have been playing for 'one year to less than three years'. Further 19.53% of students were playing for 'three years to less than five years' and maximum of 35.51% of students were playing for 'five years and above'. Thus it can be concluded that most of the students started playing e-games at very early of their age. As a result young children may develop electronic gaming habit or may imitate aggressive actions involved in e-games. E-games playing habit may be harmful if child is unable or unwilling to participate in any other interests or extracurricular activities other than e-gaming.

***Findings pertaining to objective 2***: To study the study habits of students playing violent and non-violent e-games.

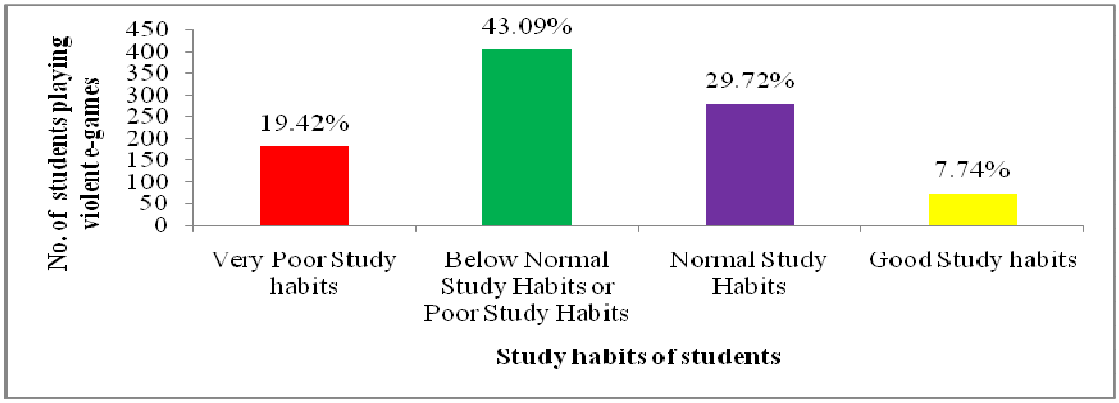


*Figure 4: Study Habits of Students Playing Violent E-Games*

Study Habits of students playing violent e-games reveals that percentage of students with very poor study habits were 19.42% whereas 43.09% had below normal or poor study habits, 29.72% of students were having normal study habits and 7.74% had good study habits. It was also revealed that no students were showing very good study habits.

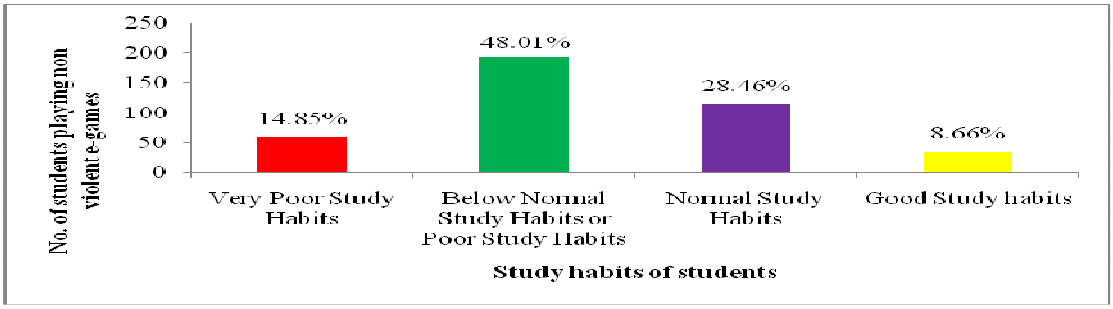


*Figure 5: Study Habits of Students Playing Non-Violent E-Games*

Similar to the group playing violent e-games, Study Habits of students playing non-violent e-gamesalso reveals that almost half of the students (48.01%) had below normal or poor study habits and a small percentage had good study habits (8.66%). Less than a third of the population reported having normal study habits (28.46%) while about 15% stated very poor study habits.

***Findings pertaining to objective 3***: To find out the significance of difference in the mean study habits of students playing violent and non-violent e-games.

**Table 2: t-value of Study Habits of Students Playing E-Games**

| Groups | Study Habits of Students Playing E-Games | |
|---|---|---|
| | Violent | Non-Violent |
| N (Total) | 942 | 404 |
| (df) | 1344 | |
| Mean | 154.48 | 155.26 |
| S.D. | 16.13 | 17.26 |
| t-value | 0.768 | |
| Level of significance at 0.05 | Not Significant | |

It is clear from the Table 2 that mean study habits scores of students playing violent e-games (154.48) is slightly less than mean study habits scores of students playing non-violent e-games (155.26), but it is not statistically significant.

Findings of objective no. 3 show that 18.05% of students are having very poor study habits, almost half (44.57%) of the sample are having poor study habits or below normal study habits, normal study habits was shown by 29.34% and 8.02% of students were having good study habits. No single student was showing very good study habits. It can be said that among many other reason for below normal study habits, one of them may be due to playing of electronic games. As already stated in context to objective no. 1, students are spending large number of hours for leisure activities. Ogletree and Drake (2007) explained that increase in time spend on leisure activity, such as video games could result in problematic consequences in other areas. Thus their time management in their study hour may be hampered due to lack of time. Gerdes and Mallinckrodt (1994) state that time management may be helpful for building confidence, and ultimately leads to academic success. It might happen that, children's study hours might be getting hampered due to playing of electronic games, if not on computer they can easily play with smart phone available to them all the time. Due to lack of proper attention one cannot excel in studies. Caldas and Bankston (1999) reported that continuous involvement any screen media like television and video games results in low performance in school subjects. On the other hand it is well known that good study habits include many different skills: time management, self-discipline, concentration, memorization and effort. In this study only 8.02% of students were showing good study habits and remarkably no single student was having very good study habit, which is again a matter of great concern.

Again in the present study it was found that overall study habits of students playing non-violent video games was good in comparison to students playing violent video games. Non-

violent electronic games are away from distracting violent content. Non-violent e-games are generally strategy based game full of tricks and healthy competitions. Thus non-violent e-games are away from distraction of violence content in which it becomes very easy to concentrate. One study by Nelson (2007) found that people who play the action video game did task faster, but at the cost of being less accurate, those who play strategy game did things more accurately but more slowly.

## Conclusion

Children today live in the world where many of their various experiences are mediated by screen technology. India is growing with technology advancement, one of the quintessential examples of that would be electronic games which stay side by side with the child till he/she grows up or beyond that. Technology has ushered in a number of leisure time activities including e-games. Development in the field of technology made at country level influences individuals too, especially adolescents as they are more aware, curious and oriented towards latest upcoming. In short, e-games are now a very significant part of young population in the world today. As today's adolescents are tomorrow's future aspirants, their activity is of most importance in today's time. Hence the present study is very much significant in knowing the e-gaming of adolescents. One of the dominant concern raises the point that devotion of large number of hours in e-gaming may hamper the study habits of adolescents. As the new media becomes increasingly popular among children, parents and teachers continually express fear about not knowing what e-games children are playing and what effects these e-games may have on youngsters. As parents play important role in their children's lives, they must know what their children are doing on their computer/online. With this knowledge, parents can set appropriate rules to monitor access to and time spent on playing e-games. Prohibiting adolescents from playing e-games is not realistic, but the awareness of what kind of e-games their children are playing and for how many hours, may allow parents to better understand the e-games they play, to discuss the e-games and to set time limits, if necessary.

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