

The Effect of Video Games on Students' Attention in Government Schools, Case of Jordanian Schools.

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Abstract

In the modern era, lives of individuals and the society have transformed as internet and technological innovations are altering the way of living. Impact of these changes and transformations is widespread and exists in all walks of life. Students are youngsters and they are also under the influence of these technological innovations. Video games have emerged from these technological innovations and the effect of video games is going to be made on students' attention. The study has been conducted on government school students so that situation of students studying in government schools can be highlighted. The purpose of the study is to find the effect of video games on students' attention in government schools. The purpose of the research paper has been fulfilled by conducting research on the sample of 150 students from government schools. The application of mean, correlation, and regression has been made and it is found that both variables are positively related but the relationship is not significant. However, result of positive relationship between the two variables shows that video games should be allowed for students and educational system should incorporate video games in the educational setting. It is recommended capitalizing on positive side of video games to increase students' attention because of video games.

Keywords: Video Games, Students' Attention, Government Schools, technological innovations.

Introduction

Video games are new trends in the age of spread of knowledge and information where computer and internet have opened the ways of entertainment and learning of students. Video games are played by people generally and youngsters play video games especially and they consume substantial time on playing video games. Therefore, video games have become an important way of consuming time for people of young age and this segment is usually related with students. There is growing interest of parents, teachers, and educational institutes to find and explore the effect of video games on students' attention. It is because of two reasons. First, video games enhance the ability of students because they become more able to give attention to even little details. Second, video games can be used as a learning medium through which students can learn. Moreover, in the public and government schools, the importance of this study is higher because these students have to be able to manage their time in smart manner as generally, government schools give little attention to students individually. The research paper has focused on Jordan as the government schools of Jordan are the study population. Video games should be taken as means and it is up to the user how to use this means. Video games have their pros and cons but intelligent and sensible students can use video games to benefit their education otherwise, these games can affect their studies negatively.

Background of the Study:

The study has been conducted on the topic of impact of video games on the attention of students in government schools of Jordan because revolution of information technology has influenced lives of everyone and students have also found new ways to be engaged under information technology. Video games are the result of this information technology as means of internet, computer, smart phones, and other technology devices have enabled it for students to play video games. In this context and background, this study has been conducted so that impact of video games on the attention of government school students in Jordan can be found (Grimley & et al., 2011).

Objectives of the Study:

- To find the Effect of Video Games on Students' Attention in Government Schools of Jordan.
- To find the situation faced by students of government schools of Jordan in this information technology era.

The research paper has used quantitative research methodology and the results have been taken by applying mean, regression, and correlation on the data collected from the sample from students studying in the government school. There is an extensive literature review in this research paper and then, findings have been drawn from the collected data.

Literature Review

Video games have become an important medium and tool for children and adults because of their significance and effectiveness. Video games have been enabled by the computer and information technology and it has opened possibilities for people and children. Virtual fun and entertainment is provided through video games as players love to be engaged through these games (Demirbileka & Iema Tamer, 2010). Video games have other attributes and attractions for players as well as they stimulate motivation and a sense of enjoyment. It is true that video games are there for recreational purposes but the impact of these games should be studied on students in the educational field (Prensky, 2003; Tuzaun & et al., 2009; Grimley & et al., 2011). It shows that there are many positive impacts of video games on the players and it is not merely an entertainment tool at all. So far as the attention of students is concerned, the impact of video games needs to be addressed and investigated.

Video games have lots of attributes which have positive impact on students as video games are good for communication, teaching, and they influence attitude and behavior of players. These attributes increase positive aspects of video games as students can take more benefits from these games. Some of the benefits for students through video games include help in problem solving skills, achievement, and rise in the commitment for learning and education (Tuzaun & et al., 2009; Kim, Park, & baek, 2009). It shows that video games can have positive aspects for students and they can increase the level of attention of students.

Positive benefits of video games for students lead to note that they are useful for learning process. However, it is important to mention that some researchers have also found negative effects of video games on students. In one of the studies, researchers have found video games as ineffective tool for learning that video games do not provide effective learning environment and opportunities for students (Kreijns, Kirschner, & Jochems, 2003). Moreover, there are some studies which have not conducted their research on video games especially but they have taken the topic of exposure to

the media. Television has been taken as the form of media and it has been associated with having negative effects on the cognitive performance of children and adolescents (Miller et al., 2007). Despite of these negative aspects and effects of video games revealed by these studies, video games cannot be simply excluded from the life of any students. Video games help and assist students as well. There are some video games which are developed for education purposes and it is up to the development and design of the video games as video games increase the level of effectiveness and usefulness in the learning process which is helpful for the attention of students (Rastgar Pour, & Marashi, 2012).

The importance of video games for different subjects has also been emphasized by some of the research studies and it has been noted that video games give and provide help in the teaching and learning subjects. Traditional practices and methods of teaching have been considered by many researchers and they have conducted little research on the modern methods and ways of teaching. Sadig (2007) has identified this aspect of little research on modern methods and ways of teaching and learning. Natasha et al (2010) have conducted a research on the students as they lack motivation and face failure in studies and it is really related with the aspect of lack of attention. The reasons of lack of motivation and increased level of failure have been attributed to lack of equipments and modern techniques in the classroom for students. Affective factors and low cognitive stamina are also the reasons and factors which lead to low attention. Therefore, in this context video games act as the means and ways to elaborate the subject lessons and topics. The contents of video games are close to real life experiences and practices therefore, they can enhance the attention level of students. Games can be used for enhancing the motivation level and interest of students in the subject. Thus, the level of interest can be increased with the help of video games. As Kebritchi (2010) has found in his research that success in completing the task increases and generates interest and it also increases the inclination towards the subject. Therefore, video games can be developed to provide challenge to the students and upon completing of tasks and assignments in the games can lead to increase the attention level of students.

In this way, video games can be used as a way to increase the skills of problem solving of students and students can be compelled to think and engage in work directly. It is not the fact that video games have not been studied in relation with motivation and increase in attention of students because there are some students which have related them with development of favorable elements for students. In one of research studies, Abrams (2008) has found that computer games can be used as the tool for motivating students in learning. He has emphasized on video games and has applied it on mathematics which is not so popular subject among students. Students find it hard and very difficult to consume time to concentrate on mathematics and video games can be used to increase the level of concentration of students for mathematics.

There are some studies which have been conducted on video games and they have been applied on the subject of mathematics. It is important to note that mathematics is not favorite subject among students. If video games can be helpful in motivating students for the subject of mathematics then it can be effective for any other subject. Ke (2008) has conducted a research and found that video games can be used for the motivation for students in their learning and teaching purposes. The topic of video games can be related with the electronic environment in which video games can be very important part. Computer and internet are used for video games and students are given these devices or they are provided an environment where they can be in touch with one of these devices. Therefore, video games and electronic environment can be very helpful for students to learn concepts fast and effectively. Çankaya & Karamete (2009) have found that abstract

concepts are easier and convenient to be learnt in the electronic environment. Video games can be an important and effective part of such electronic environments.

Çankaya & Karamete, (2009) have also conducted studies on the impact of computer games on the students' attitudes and the study has found that there are positive results of computer games or video games on the attitudes of students. There are also some studies which have specifically noticed positive results of video games on the achievements and progress of students and these studies have been made specially on these two variables which have been taken for this research. Demirbileka and Tamer (2010) have developed a theoretical framework which has the central purpose to have an impact on the subject of mathematics through computer games or video games. The study is qualitative in nature and it has been conducted in the context of Turkey. The success rate and achievement of students increased due to the use of video games. Students performed better due to video games and it has been a supporting research study on the particular topic.

Grimley & et al. (2011) have also conducted a research on these variables and the aim of their research has been to find the impact of video games on students and their attention and learning levels. The method of presentation and video games have been compared in this research and the students have been found to have increased emotional intelligence and high level of alertness who have been trained to use computer games or video games. The use of video games increased the level of competition among students and they were active in participation.

Above research studies in the literature review have been mixed in terms of the impact of video games on the attention of students but there is majority of research studies which have found positive relationship and impact of video games on the students and their attention level.

Hypotheses for the Study:

In the result of literature review, following hypotheses have been developed.

H1: Video games have positive effect on students' attention in government schools of Jordan.

H2: Video games do not have positive effect on students' attention in government schools of Jordan.

Methodology

This research has adopted quantitative research methodology which is based on the cause and effect relationship of the two variables in the study. First variable used in this study is the students' attention and it is dependent variable while second variable used in the study is video games and it is independent variable. Although, the research paper has included an extensive literature review but the literature review has been used for development of hypothesis only. It has been based on the effect of video games on the students' attention in government schools of Jordan. Therefore, the research should be taken as the case on Jordan's government schools with these variables. However, quantitative research methodology as been used to test the hypothesis because quantitative research method allows generalizing results and the results of this study can be applied in different situations. Therefore, it also makes the research study empirically strong and viable (Norris et al., 2015).

Questionnaire has been used as data collection tool and it is convenient and effective to collect results through questionnaire. Each question in the questionnaire has five points or options on the likert scale and the respondents have been allowed to choose any one of the options. 5 denote

to strongly agree and 1 denotes to strongly disagree on the likert scale. The study population for this research paper is the students of government schools and data has been collected from students through questionnaire. There might have been two ways of getting data of respondents. First, teachers could also provide their responses but students were considered and their responses were used to draw results.

Mean, correlation, and regression are the statistical methods which have been applied on the collected data through questionnaire. These methods have been used to indicate and find the nature and degree of relationship between the two variables. Then, the obtained data has been interpreted and based on that data, findings have been drawn.

Ethical considerations have been observed in data collection where each respondent has been communicated with the purpose and objectives of the research. The aim of the research is to find the relationship of the two variables and this aim has been communicated. Each respondent has been ensured that his or her data has been protected and secure. Confidentially and anonymity of each respondent have been respected so that collected data can be used for the communicate aims and objectives only.

Figures and Tables

In the following, the mean, correlation, and regression have been used as statistical methods to draw findings from the collected results.

Frequency Table I play video games.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	26	17.3	17.3	17.3
Disagree	24	16.0	16.0	33.3
Neutral	23	15.3	15.3	48.7
Agree	41	27.3	27.3	76.0
Strongly Agree	36	24.0	24.0	100.0
Total	150	100.0	100.0	

In response to the above statement, respondents have been mixed in playing video games and the respondents belong to government schools in Jordan. However, respondents agreeing and strongly agreeing with the statement are in majority.

I have attained high grade in examination and I am also active player of video games.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	33	22.0	22.0	22.0
Disagree	33	22.0	22.0	44.0
Neutral	22	14.7	14.7	58.7
Agree	24	16.0	16.0	74.7
Strongly Agree	38	25.3	25.3	100.0
Total	150	100.0	100.0	

Second statement has also generated mixed results and almost equal number of respondents has chosen each option on the likert scale.

I feel the content of video games in my personal life practically.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	28	18.7	18.7	18.7
Disagree	36	24.0	24.0	42.7
Neutral	26	17.3	17.3	60.0
Agree	28	18.7	18.7	78.7
Strongly Agree	32	21.3	21.3	100.0
Total	150	100.0	100.0	

Third statement has also received almost equal number of responses on five options on likert scale.

Video games represent my personal life and it has positive impact on me.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	27	18.0	18.0	18.0
Disagree	27	18.0	18.0	36.0
Neutral	25	16.7	16.7	52.7
Agree	39	26.0	26.0	78.7
Strongly Agree	32	21.3	21.3	100.0
Total	150	100.0	100.0	

Fourth statement has majority of respondents on agreeing and strongly agreeing options on the likert scale but other options have also been selected by respondents.

I am able to concentrate deeply on studies after playing video games.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	34	22.7	22.7	22.7
Disagree	26	17.3	17.3	40.0
Neutral	29	19.3	19.3	59.3
Agree	35	23.3	23.3	82.7
Strongly Agree	26	17.3	17.3	100.0
Total	150	100.0	100.0	

Fifth statement has almost equal number of responses for five options on the likert scale.

Sometimes, I am not able to give enough time to studies due to playing video games.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	32	21.3	21.3	21.3
Disagree	40	26.7	26.7	48.0
Neutral	24	16.0	16.0	64.0
Agree	30	20.0	20.0	84.0
Strongly Agree	24	16.0	16.0	100.0
Total	150	100.0	100.0	

Sixth statement has majority of respondents on disagreeing and strongly disagreeing options but other options have also been liked by respondents.

I get much assistance and help from video games in my subjects at school.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	35	23.3	23.3	23.3
Disagree	18	12.0	12.0	35.3
Neutral	33	22.0	22.0	57.3
Agree	33	22.0	22.0	79.3
Strongly Agree	31	20.7	20.7	100.0
Total	150	100.0	100.0	

Seventh statement has got almost equal number of responses for each option on the likert scale.

I am able to concentrate on minute details because of my excellence in video games.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	33	22.0	22.0	22.0
Disagree	31	20.7	20.7	42.7
Neutral	26	17.3	17.3	60.0
Agree	29	19.3	19.3	79.3
Strongly Agree	31	20.7	20.7	100.0
Total	150	100.0	100.0	

Eighth statement also has almost same number of respondents for each option on the likert scale.

I feel that video games have positive role in my studies.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	31	20.7	20.7	20.7
Disagree	39	26.0	26.0	46.7
Neutral	25	16.7	16.7	63.3
Agree	29	19.3	19.3	82.7
Strongly Agree	26	17.3	17.3	100.0
Total	150	100.0	100.0	

Ninth statement also has same number of responses on each option on the likert scale.

My parents and teachers advise me that I should play video games in balanced way.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Strongly Disagree	33	22.0	22.0	22.0
Disagree	23	15.3	15.3	37.3
Neutral	33	22.0	22.0	59.3
Agree	28	18.7	18.7	78.0
Strongly Agree	33	22.0	22.0	100.0
Total	150	100.0	100.0	

Tenth statement has almost equal number of respondents on each option on the likert scale.

Histogram

Histograms have been used for each question in the questionnaire and bars have been used to indicate number of respondents for each option on the likert scale. There are 150 numbers of respondents for this research and these histograms have indicated that the mean value is around 3. There are some statements which are below 3 as well and they the highest mean for the study population has been 3.25. However, it is noted that respondents have chosen all options on the likert scale and it cannot be said that the responses are neutral. The collected data should be viewed in light of the data spread and it is there for each option on the scale. Findings can be drawn through

this perspective that responses of respondents have been there for all options on the likert scale. The students of government schools in Jordan are found to have mixed responses when they have been asked for playing video games and its effect on their attention towards studies. Correlation tables have been included in the appendix 1.

Correlation and Regression Results:

The result of correlation of playing video games by students of government schools in Jordan is positive but insignificant, producing the result that it is insignificant. And therefore, there is no relationship between the two variables. The correlation tables have shown positive results which can be interpreted that with more video games for students there would be increase in attention level of students. However, it cannot be said that the positive relationship between the two variables, is significant because majority of responses revolves around the mean option of the likert scale. It is interpreted that positive relationship does not have strong relationship and it allows broader room for interpretation further. It also shows that number of respondents for each option on the likert scale has been same due to which the correlation tables have provided insignificant results.

It can be seen that playing video games has a positive effect on grades, and while it is the case, the results are insignificant, indicating that there is no effect of playing video games on grades among the students of governments schools in Jordan. The regression table and results are also in line with the correlation results. There is no effect of independent variable on the dependent variable. Positive relationship is optimistic and it is clear that relationship is not neutral but results are not significant. Based on the above data as little discussion has also been done, findings have been drawn in the following section. See appendix 2 for regression tables.

Findings

The research paper has found based on the results of mean, correlation, and regression. Then, findings have been made aligned with previous research studies where such positive but insignificant relationship between video games and students' attention has been found. The findings have been drawn separately based on three statistical methods used in this research paper i.e. mean, correlation, and regression. After drawing findings under these three statistical methods, collective findings would be presented and this would be followed by research studies aligned with this research study.

Mean results of ten questions included in the questionnaire have been interpreted and it is found that students of government schools have mixed responses. There is not one single option which has been selected by respondents overwhelmingly. The study has found that in Jordan, government schools and their students do not have same environment at their homes and they vary very much in their lifestyle and attitudes. Based on these results of mean, the relationship of video games and students' attention in government schools of Jordan has been neutral. There is no one response which can be said to be the response of whole population. Based on this, there is no effect of video games on the attitudes of students.

The correlation and regression tables and findings from these tables should be discussed together where the relationship between the two variables has been found to be positive but it is not significant. Positive relationship between the variables is an interesting finding because it is generally perceived that video games waste time of students and they are not able to give enough attention to studies. Complaints from teachers and parents are also brought on the surface that video

games are hurting the studies of the students. However, the finding of this study in light of the results in correlation and regression shows that both variables are related with other positively. However, it is found that the relationship between the two variables is not significant. There are some studies which are in line with the findings of this research paper.

Çankaya & Karamete, (2009) have also conducted studies on the impact of computer games on the students' attitudes and the study has found that there are positive results of computer games or video games on the attitudes of students. Grimley & et al. (2011) have also conducted a research on these variables and the aim of their research has been to find the impact of video games on students and their attention and learning levels. The method of presentation and video games have been compared in this research and the students have been found to have increased emotional intelligence and high level of alertness who have been trained to use computer games or video games. The use of video games increased the level of competition among students and they were active in participation.

These are the research studies which have also found positive relationship of video games and students' attention. This study has contributed to existing literature by offering the case of Jordan for the students of government schools. However, it is important to note that they have considered other factors which lead students to give more attention to their studies but the motive and aim of their research involve the relationship of video games on the students in the government schools of Jordan by considering different attributes and factors associated with them.

Conclusion and Recommendations

The research paper concludes that video games are increasingly common among children, teenagers, and adults because of spread of technology and technological devices. This topic has been discussed with the case of Jordan and the students of its government schools have been taken as study population. Students are considered to be the segment which plays video games on priority. The participation and engagement of students in video games have mixed reactions from parents and teachers as it is perceived that video games may waste energy and time of students. Therefore, this research paper has taken the variables to find the effect of video games on attention of government school students in the case of Jordan. Attention of students is the variable which involves different factors. These factors are responsible for good studies of students. An extensive literature review has been presented and then means, correlation, and regression statistical methods have been employed to draw findings from the data collected from students studying in government schools. Questionnaires have been used for data collection and the responses have been collected from students in the government schools of Jordan. The paper has found that there is no effect of video games on attention of students but the relationship between both variables has been positive. The results of the study are aligned with other studies and based on these findings; following recommendations have been put forward.

The research paper recommends that video games should be based on educational purposes in the government schools of Jordan so that difficult concepts of a subject can be taught to students in meaningful and easy manner. Video games should be taken as means to engage government schools students in Jordan because real purpose of students should be to learn and study effectively. It is also recommended that parents and teachers should not judge anything prematurely as research should be conducted on any problem. In this way, better decision can be made.

Future Research Directions:

Future research directions are limitations of this study as well. Private schools of Jordan should also be studied for these variables and more diverse and bigger study sample should be taken for future research. This study is on government schools of Jordan and it has not found an effect of video games on government school students' attention in Jordan therefore, further research should be conducted on these variables to have an effect. Moreover, neighboring countries of Jordan should also be taken for study of these variables so that differences can be found between countries.

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