

Electronic Games and Their Relationship to Social Responsibility and Information Processing Among University Students

Walid Hassan Ashour Hassan Elkhateeb¹, Zeinab M. Abdel Azim^{1,2}, and Mohamed H. Ragab Khalaf^{1,3}

¹ Department of Education & Psychology, College of Science and Arts at Qurayyat, Jouf University, Saudi Arabia.

² Department of management information systems, Egyptian Institute of Alexandria Academy for Administration & Accounting, Alexandria, Egypt.

³ Department of Educational Technology, Alexandria University, Alexandria, Egypt.

walid_elkhateeb@edu.asu.edu.eg, zena_fmaz@yahoo.com, mhragab@ju.edu.sa

Summary

Nowadays, playing electronic games is one of the most widespread phenomena around the world and affects societies in general, especially adolescents and children. There is a great need to know the direct and indirect impact of games on their social formation. Electronic games are known as electronic commerce commodity that represents the most important part of the modern digital culture, and it has a great impact on the individual and society, in addition to the primary purpose of playing it is the purpose. For entertainment and pleasure in leisure time, she also became a friend of the teenager who does not leave him at home. With him, whether via TV, computer, computer, internet, smartphone, and outside the home, you are also present with him through PlayStation halls and Internet cafes, which may cause addiction to those games in a way that negatively affects the health of the person, the individual and society.

Keywords:

E-Games; Social responsibility; Information processing.

1. Introduction

Playing electronic games at the present time is one of the most prevalent phenomena around the world and affects societies in general, especially adolescents and children. There is a great need to know the direct and indirect impact of games on their social formation (Abbas, 2018). Electronic games are known as an electronic commercial commodity that represents the most important part of the modern digital culture, and it has a great impact on the individual and society, in addition to the fact that the main goal of playing with them is for the purpose of entertainment and pleasure in leisure time, and it has also become a friend of the teenager who does not leave him at home. With him, whether via TV, computer, computer, internet, or smartphone, and outside the home, you are also present with him through PlayStation halls and Internet cafes, which may cause addiction to those games in a way that negatively affects the health of the individual and society (Kholoud, Fawzia, 2021). With technological progress, which is the ruling feature of the current era, these games have advanced in their capabilities and surpassed traditional games in terms of their impact and attracting attention, whether in terms of design or sound and visual effects that give them the true nature of the playing environment itself so that the player feels as if he is part of a real environment in which reality simulates, in a virtual environment designed professionally and intelligently

that interacts with each player. The interaction adds more realism, which will have a great impact on adolescents and children, who represent the most affected and desirable group to play and immerse themselves in various virtual electronic game environments to the extent that they may reach addiction to play and survival. In his virtual environments and detachment from the real environment (Hamza, 2021). Perhaps the spread of electronic games via the Internet in many Arab societies in general and the Gulf in particular, in order to attract different age groups, whether young, young or old, so that some of them spend long periods of time playing electronic games, which may cause addiction to electronic games (Ahmed, 2020). Thus, this may affect the social responsibility of individuals, because the greater the addiction to electronic devices, the lower the level of social interaction. Isolation and alienation of the individual from his real world and the dismantling of family and social ties (Al-Suwailimi, 2014). When the learner or student engages in electronic games, this may affect his processing of information. When the individual receives stimuli from the environment, or the learner receives information from the teacher, and to issue the response, the process of processing information is carried out on different stimuli from the appearance of the stimulus until the issuance of the response. Information processing levels can be visualized as a continuum that extends from the superficial outputs of sensory analysis to the strong and deep outputs of semantic associations (Sadiq, 2010).

2. Terminology of study

2.1 E-Games

E-Games are defined by Salan and Zimmerman as games available in an electronic form and include computer games, online games, video games, mobile games, and handheld games (salan & Zimmerman, 2004, p86). (Khiari, 2019; 10) defines it as entertaining and educational entertainment software that integrates real and virtual reality through various electronic devices that the user exercises by employing his senses (hearing, sight, and touch) and controls them according to the rules and laws available to him with high accuracy and fast capabilities of sound and image. It is defined procedurally as all the games used by the Egyptian male and female students of Al-Jouf University, Ain Shams University, and Alexandria, who are in the category of adolescents.

2.2 Social Responsibility

Ibrahim 2019 defines it as the individual's awareness of his social role in the environment in which he is located.

2.3 Information processing

Schmeck, 1983 defines it as the process of processing information within the mind.

3. Literature Review

Play is a mental and physical activity carried out by the individual, whether he is young or old, to meet his need, whether it is recreation, or unloading excess energy, or for an educational purpose, or other needs. The importance of playing varies from person to person and according to age groups and gender as well (Abbas, 2018). Play is also a social activity practiced by different individuals and segments of society, especially adolescents and children. It is also an educational activity that specialists in the field of educational technologies seek to employ in developing various educational skills (Al-Quwaider, 2011). With the advent of the communications revolution and the spread of digital technology, the concept of electronic games has become widespread and widespread, as it represents the concept of playing in the context of the technological revolution that the world is witnessing at the present time. Perhaps with the development of communications and the increase in the speed of the Internet around the world and the introduction of virtual reality technologies, games have departed from their traditional concept and their impact has become unusual on societies due to the capabilities of this technology that immerses the individual in the virtual environment of the game away from reality, which will have a significant impact on many. The mental, psychological and social aspects of this individual, especially if he is a teenager, which is the most used and consuming group for this type of games (Mazen, Saleh, and Hammad, 2021). The importance of electronic games is that they are considered the modern and influential method if they are employed in the educational or training aspect because they involve the learners in the educational situation in a dynamic manner and simulate reality, and they are a desirable educational means where learning is taken from them in a context of fun in addition to the stimuli. The audio-visual surroundings during learning, which creates an atmosphere full of motivation, attention, and interest on the part of the learner, which increases the achieved learning efficiency to the maximum extent possible (Nassar, 2018). Despite the advantages of electronic games, their negative impact cannot be ignored, whether on the mental or psychological, and social side, as many previous studies (Soleimani, 2021; Kairouan, 2020; Kulthum, and Yamina, 2021) indicated the negative impact of electronic games, whether on health. The mental and psychological nature of the individual and the social relations between this individual and his surroundings, so that electronic games, with their technology, stimuli, and professionally designed virtual electronic environments, create a kind of isolation that makes the individual stay away from his group, and his social responsibility is negatively affected and pushes him towards aggressive behavior, whether towards himself or

towards his community. This is in addition to the emergence of destructive electronic games for young people and their spread through social networks, which are governed only by the commercial profit criterion for the company or the institution producing them, which in the light of which must be made more effort by researchers and educators to study these phenomena and work to set standards in the light of which Legalize the use of those games. Social media have become significantly important platforms for sentiment analysis processing research (Alruily, M., & Shahin, O. R., 2020) and (Ayadi, R., Shahin, O. R., 2021). Also, social responsibility is the individual's responsibility to himself for the group to which he belongs to work on its progress (Sayyed Othman, 1986). And personal responsibility refers to the individual bearing his responsibility to himself for his actions and decisions and the consequences of these actions and decisions on others (Linley & Maltby, 2009). Social responsibility means two things: The first meaning is to ensure the prosperity of others in their daily lives. The second meaning includes progress towards achieving one's own goals without violating or violating the expected rights of others. Responsibility contributes to giving meaning to individuals' lives to achieve their personal interests or goals and not conflict with the interests of others. Responsibility also contributes to their living in harmony or harmony and cohesion in their societies. Examples of relationships in which responsibility is the relationship of parents to children, teachers to their students, the relationship between the leader and subordinates, and the relationship between doctors and patients (Bierhoff, 2002). Social responsibility includes attitudes and actions that describe caring for others and achieving contentment and prosperity for society (Campbell, 2002). Deep processing of stimuli or information leads to better remembering, and the greater the degree of depth of information processing, the greater the understanding and the degree of semantic analysis and enrichment. Craik & Lockhart (1972) indicates that individuals can analyze a stimulus at several levels: The shallow levels, which include analysis in light of physical or sensory properties such as brightness or pitch. The deep levels include analysis in the light of meaning and interrelationships between derived meanings and related experiences with the stimulus.

4. Methodology

4.1 Participants

Participants were 450 university students enrolled in several undergraduate's program at Jouf University (Saudia), Ain Shams University and Alexandria University (Egyptians). They were 200 males and 250 females with ages ranging from 18 to 30 years old.

4.2 Research questions

1- To what extent does the use of electronic games contribute to predicting social responsibility among university students?

2- To what extent does the use of electronic games contribute to predicting information processing among university students?

4.3 Research tools

Electronic games usage scale: prepared by researchers.

Social Responsibility Scale: prepared by Al-Shafi'i 2019. The scale consists of 42 statements, including 32 positive statements and 12 negative statements, and they are answered according to a quadrant graded level (always, often, sometimes, never) and the responses are given scores (4, 3, 2, 1) for positive expressions and reflects for negative expressions, so the highest score is 168 and expresses the maximum degree and the lowest score is 42.

The Information Processing Scale: prepared by Schmeck, translated into Arabic by Al Ghurairi 2003, and consists of 59 statements and is answered according to a three-step scale of response (always applicable, sometimes applicable, not applicable) and responses are given grades (3, 2, 1) for positive statements and reflects for negative statements. Thus, the highest score is 177 and expresses the maximum degree of awareness and awareness of social responsibility, and the lowest score is 59.

4.4 Research Procedures

- Application of study tools.
- Analyze data statistically.
- Interpretation and discussion of the results.

5. Experiments

To complete the research results, the statistical method t-test will be used to prove the fact that state as the social responsibility differ from a statistically significant difference between low and high users of electronic games among university students. This answer comes from divided the electronic games users into low and high users, the mean and standard deviation were calculated, and the differences between the mean scores of low and high users of electronic games in social responsibility were calculated.

Table (1) The mean, standard deviation, and t-test results between low and high users of electronic games in social responsibility

	Lows N=110		The highs N=103		T Value
	mean	standard deviation	mean	standard deviation	
Social Responsibility	130.05	21.18	114.41	21.29	5.37

From Table (1), we conclude that there are statistically significant differences at level (0.01) between low and high users of electronic games in social responsibility in favor of low use of electronic games, as the average of low use of electronic games is higher than the average of high use of electronic games in social responsibility. This indicates that the excessive use of electronic games negatively affects the individual's interest in society and his understanding of its habits and values, and the decrease in participation in any work that contributes to the progress and prosperity of society, compared to the low use of electronic games. Its habits, values, and everything that affects it, and participation in any work related to society contributes to achieving its progress and stability.

Now, the study of the level of information processing that differ from a statistically significant difference between low and high users of electronic games among university students will be explained.

Table (2) The mean, standard deviation, and t-test results between low and high users of electronic games in information processing

	Lows n=110		The highs n=103		T Value
	mean	standard deviation	mean	standard deviation	
information processing	125.75	27.66	110.76	25.47	4.11

It is clear from Table No. (2) that there are statistically significant differences at level (0.01) between low and high users of electronic games at the level of information processing, in favor of low users of electronic games, as the average of low users of electronic games is higher than the average of high users of electronic games at the level of Information processing. This indicates that the excessive use of electronic games affects the students' processing of information about the low use of electronic games, as the low use of electronic games tend to the deep and extensive processing of information, and this helps them to understand the information, while the excessive use of electronic games affects the processing of information as they face difficulty in Deep processing of information and thus affects their memory of information, their academic achievement and the extent to which they benefit from what has been learned.

6. Conclusion and future work

The study aims to examine the relationship of electronic games and both social responsibility and information processing among university students. The sample of the study was (450) male and female students from Al-Jouf University, Ain Shams University and Alexandria University. The researchers applied to them the social responsibility scale prepared by Al-Shafi'i 2019, the information processing scale prepared by Schmeck translated into Arabic by Al-Ghariri 2003, the measure of the use of electronic games prepared by researchers. The study found that there are statistically significant differences at the

level (0.01) between low and high users of electronic games in social responsibility, in favor of low users of electronic games. It was also found that there are statistically significant differences at level (0.01) between low and high use of electronic games in the level of information processing, in favor of low use of electronic games. As for future studies, the study recommends conducting cross-cultural studies to compare societies in the impact of using electronic games on social responsibility and information processing. There are many recommendations from this study such as the needed for creating awareness programs for male and female students about the dangers of excessive use of electronic games on the mental health of the individual in addition the creation awareness programs for male and female students about the danger of excessive use of electronic games on the deep processing of information. Finally, there is needed for conducting workshops for male and female students on how to use electronic games appropriately or appropriately, and awareness of parents about the dangers of excessive use of electronic games by their children.

References

- [1] Sadiq, Muhammad Ashour (2010). The relationship between empathy and professional satisfaction of the school psychologist. Unpublished Ph.D. thesis, Faculty of Education, Ain Shams University.
- [2] Ahmed, Randa Mohamed Sayed (2020). The relationship between maladaptive cognitive schemas in serving the individual and addiction to electronic games among a sample of female university students: a predictive study. *Journal of Studies in Social Work and Human Sciences*, 51 (3), 884-926.
- [3] Al-Suwailimi, Shatha Ali Muhammad (2014). Addiction to using modern electronic devices and its relationship to social interaction and self-confidence, a comparative study between male and female middle school students in the city of Riyadh. Unpublished Master's Thesis, College of Social and Administrative Sciences, Naif Arab University for Security Sciences.
- [4] Al-Rufou', Muhammad Ahmad (2008). Information processing methods for secondary school students in Jordan and their relationship to gender and specialization. *Damascus University Journal*, 24 (2) 195-233.
- [5] Ibrahim, Ibrahim Al-Shafei (2019). Social responsibility test. Cairo: Modern Book House.
- [6] Alruily, M., & Shahin, O. R. (2020). Sentiment Analysis of Twitter Data for Saudi Universities. *International Journal of Machine Learning and Computing*, 10(1).
- [7] Ayadi, R., Shahin, O. R., Ghorbel, O., Alanazi, R., & Saidi, A. (2021). Sentiment Analysis of COVID-19 Tweets: Impact of Pre-processing Step. *International Journal of Computer Science & Network Security*, 21(3), 206-211.
- [8] Osman, Syed Ahmed (2010). The Ethical Analysis of Social Responsibility. Second Edition, Cairo: Anglo-Egyptian.
- [9] Othman, Syed Ahmed (1985). Muslim social and personal responsibility. Second Edition, Cairo: Anglo-Egyptian.
- [10] Abbas, Rana Fadel. (2018). Electronic games and their impact on the level of academic achievement of middle school students. *Journal of Educational and Psychological Research*, 15 (59), 303-329.
- [11] Hamza, Passion (2021). Migration of children and adolescents to the virtual world and the contribution of psychological flow experience to addiction to electronic games. *Journal of Psychological and Educational Studies*, 37 (1), 8-25.
- [12] Kholoud, Ben Sghir & Fawzia, Ziani. (2021). Teens and electronic games between fun and instill aggressiveness. (PhD thesis), Mohamed Boudiaf University of M'sila: Faculty of Humanities and Social Sciences.
- [13] Khairay, Zubaydah. (2019). Electronic games and their impact on family values "fourth year average model" field study on parents. (Master's study), University of Martyr Hama Lakhdar El Wadi: Faculty of Social Sciences and Humanities.
- [14] Al-Qwaider, Maryam. (2012). The effect of electronic games on children's behavior. An analytical descriptive study on a sample of schoolchildren. (Master's thesis published). Algeria.
- [15] Gharbi, Abdel Latif, and Eid, Hussein Ham. (2019). Electronic games the harms and benefits. *Society and Sports Journal*, 2(1), 22-30.
- [16] Mazen, Hossam El Din Mohamed, Saleh, Shoaib Mohamed, and Hammad, Hassan Rania. (2021). Designing a virtual environment using electronic games to develop some language skills for the fourth grade students in the Arabic language subject. *Journal of Young Researchers in Educational Sciences for Graduate Studies*, Sohag, 8(8), 437-481.
- [17] Nassar, Nawal (2018, 4). The effectiveness of the kindergarten environment based on electronic educational games on developing creativity in children. The Fifth International Conference for the Environment Sector at the Faculty of Girls - Ain Shams University in cooperation with the Egypt Foundation for Education and Development and the Egyptian British Association for Education, entitled: Early Childhood Forum (Challenges and Hopes). Ain Shams University, Women's College.
- [18] Soleimani, Manal (2021). The repercussions of electronic games on the mental health of secondary school students in light of the Corona pandemic. (Master Thesis), Oum El Bouaghi University: Faculty of Social Sciences and Humanities.
- [19] Kairouan, Fouzia. (2020). Electronic games and their relationship to school violence among middle school students (PhD thesis), Ahmed Deraya University - Adrar.
- [20] Kulthum, Bousseila, and Yamina, Massoudi (2021). The relationship of electronic games with violent behavior within the educational institution: a field study on a sample of Intifada primary students. (Master Thesis), Ahmed Deraya University - Adrar.
- [21] Schmeck, R.R. (1983). Learning styles of college student. In: R. F. Dillon & R. R. Schmeck (Eds) *Individual differences in cognitive*. London: Academic Press Inc.
- [22] Craik ,F,I,M,& Lock hart ,R.R.(1972)Levels of processing : A frame work for memory research, *Journal of Verbal Learning ann Verbal Behavior* ,11, 671- 684.
- [23] Bierhoff, H. W. (2002). *Prosocial behaviour*. New York: Psychology press.
- [24] Campbell, C. D. (2002). Promoting social responsibility in graduate psychology training. Paper Presented at the Annual Meeting of the American Psychological Association. (Chicago, August 22-25, 2002) (ERIC Document Reproduction Service No 470415).
- [25] Linley, A., & Maltby, J. (2009). Personal responsibility. In S. J. Lopez (Ed), *The Encyclopedia of Positive Psychology* (pp. 685- 689). West Sussex: Wiley- Blackwell.
- [26] Salan, K, & Zimmerman, E. (2004). "Rules of play": Game design fundamentals. Cambridge, MIT press.