Computer Game and Psychological Motivation of Adolescents

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INTRODUCTION

One of the concerns of today’s parents is their children’s excessive occupation with computer games. Numerous studies depict that computer games have become a major part of children’s life (Grinberg et al., 2008; Ito et al., 2008; Lenhart et al., 2008; Roberts et al., 2005; Olson et al., 2007). According to the official report of National Center for Educational Statistics (NCES), children’s rate of occupation with computer games reached 90% in 2001 from 27% in 1984 (Amini., 2007). In Iran, there exists no comprehensive research record in regards children’s occupation with computer games (manteghi, 2001). Unofficial exclusive statistics depict that more than 56% of Iranian adolescents are occupied enthusiastically with excessive utilization of computer games (Amini., 2007).

Most studies only have focused on detrimental effects of video games on children. Some of such effects are: Development of aggressive attitude in children (Abdulkhaleghi et al., 2003; Javadi et al., 2009), nefarious addiction to computer games (Yee, 2006), social isolation (Doran et al., 2002), physical impairments such as blood pressure, obesity and ocular complications (quoted from Arman, 2004). However, there exists a group of researchers that emphasizes on promotion of computer games so that children’s problem solving procedures (quoted from Arman, 2004), their compliance in group works (FattahiBayat et al., 2007) and their learning motivation (Berab, 2007, quoted from Hoffman, 2009) can be facilitated. Furthermore, they insist that computer games can facilitate efficient transition of conventional education into progressive educatio and provide sufficient educational potentials for intellectually disabled students (Rezaean, 2003). Recently, researchers believe that educational potentials of computer games can facilitate students’ basic learning skills. Such potentials will materialize when motivational elements of children’s occupation with computer games are evaluated, depicting which of the occupational elements of the computer games can prepossess children and their excitement requirements (Salisch and Kristen, 2006). Parents should choose those computer games that only occupy children’s leisure time and at the same time, instructors and educational officials should only promote educational and class-based computer games. Computer game developers should computer games with educational objectives and psychoanalytic professionals should utilize games in their distinctive clinical environments and assessments.
In today’s researches, the issue at stake is the efficient utilization of computer games so that its potential educational potentialities can be materialized and its detrimental consequences can be curbed. As mentioned earlier, children’s motivational absorption towards computer games should be studied so that their emotional and motivational preferences can be identified in their occupation with computer games.

The present research studies psychological motivations of guidance and high school students’ occupation with computer games.

**MATERIALS AND METHODS**

Research methodology is descriptive and its statistical population includes all the boy students of guidance and high schools of Minab City in their 2010-2011 school year. Through utilization of Morgan’s table and random stratified sampling, statistical density of research sample is appointed 184, 122 and 62 of which constitutes of guidance and high schools respectively. For research data accumulation, Olson’s evaluative questionnaire of psychoanalytic motivations of computer games and demographic questionnaire are utilized. Olson’s questionnaire analyzes children’s psychological motivations in their occupation with computer games. The present research studies psychological motivations of guidance and high school students’ occupation with computer games.

**Results:**

Results showed that 85 percent of subjects 2 to 3 hours a day to devote to games and findings demonstrated that there is significant difference between guidance school students and high school students in psychological motives such as refreshment, compete with others and win, relaxation, like the guns & other weapons, creativity, forgetting problems, discharging aggression, imitation of friends, educate others, and make new friends. Other results showed that most adolescents in this study incentives to fun and exciting for the game, to play age had a positive correlation with strength of motivation for playing which means that older students had played with a stronger motivation.

Table 1: independent t test for investigation of psychological motivation in guidance school students and high school students

<table>
<thead>
<tr>
<th>variable</th>
<th>guidance school students</th>
<th>high school students</th>
<th>Calculated t value</th>
<th>Degree of freedom</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fun</td>
<td>122</td>
<td>62</td>
<td>0.70</td>
<td>1.90</td>
<td>0.055</td>
</tr>
<tr>
<td>Exciting</td>
<td>122</td>
<td>62</td>
<td>0.77</td>
<td>1.19</td>
<td>0.23</td>
</tr>
<tr>
<td>Refreshment</td>
<td>122</td>
<td>62</td>
<td>0.26</td>
<td>0.69</td>
<td>0.0001</td>
</tr>
<tr>
<td>Compete &amp; win</td>
<td>122</td>
<td>62</td>
<td>0.15</td>
<td>4.49</td>
<td>0.0001</td>
</tr>
<tr>
<td>Relaxation</td>
<td>122</td>
<td>62</td>
<td>0.11</td>
<td>3.24</td>
<td>0.0001</td>
</tr>
<tr>
<td>Nothing else to do</td>
<td>122</td>
<td>62</td>
<td>0.13</td>
<td>0.52</td>
<td>0.60</td>
</tr>
<tr>
<td>like the gun &amp; other weapons</td>
<td>122</td>
<td>62</td>
<td>0.06</td>
<td>3.04</td>
<td>0.003</td>
</tr>
<tr>
<td>Creativity</td>
<td>122</td>
<td>62</td>
<td>0.05</td>
<td>3.06</td>
<td>0.003</td>
</tr>
<tr>
<td>Learning</td>
<td>122</td>
<td>62</td>
<td>0.95</td>
<td>1.45</td>
<td>0.10</td>
</tr>
<tr>
<td>Forgetting problems</td>
<td>122</td>
<td>62</td>
<td>0.18</td>
<td>2.12</td>
<td>0.033</td>
</tr>
<tr>
<td>Discharging aggression</td>
<td>122</td>
<td>62</td>
<td>0.95</td>
<td>3.26</td>
<td>0.0001</td>
</tr>
<tr>
<td>Play with others</td>
<td>122</td>
<td>62</td>
<td>0.92</td>
<td>0.79</td>
<td>0.97</td>
</tr>
<tr>
<td>Imitation of friends</td>
<td>122</td>
<td>62</td>
<td>0.08</td>
<td>4.51</td>
<td>0.0001</td>
</tr>
<tr>
<td>To teach others</td>
<td>122</td>
<td>62</td>
<td>0.13</td>
<td>3.67</td>
<td>0.0001</td>
</tr>
<tr>
<td>Escape from lonely</td>
<td>122</td>
<td>62</td>
<td>0.89</td>
<td>0.20</td>
<td>0.83</td>
</tr>
<tr>
<td>Make new friends</td>
<td>122</td>
<td>62</td>
<td>0.01</td>
<td>2.44</td>
<td>0.015</td>
</tr>
</tbody>
</table>
RESULTS AND DISCUSSION

Most parents regard computer games as entities that make children socially isolated. However, research statistical sample believes that computer games acquire social nature fundamentally. Computer games facilitate opportunities for casual conversation. For computer gamers of the preset research, such casual conversations are a natural outcome among adolescents.

Mutual Learning Environment:
In platforms of computer games, mutual and friendly learning procedures alongside with fruitful competitive infrastructure can be promoted, resulting in collective understanding and consent. In the present research, 67% of participants believe to acquire pleasure from assisting their friends in their coping strategies with computer games. For these participants, computer game-oriented discussions are considered to be the key in showing their friends their winning tricks.

Befriending Opportunities:
Computer games can provide efficient befriending opportunities. In the present research, 66% of the participants believe that computer games can be regarded efficient opportunities for making new friends. Furthermore, 71% of research participants identify computer games as interfaces where they can find friendly playmates of their own age. In a survey of statistical population of 78 intellectually average children, it is indicated that the issue of befriending has become a psychological motivation for such children, since they experienced various instance of social ostracism from normal children of heir own age. Therefore, according to Olson (2010), intellectually disabled children salvage befriending opportunities of computer game platforms much more dearly than normal children.

Emotional Motivations of Computer Games:
Emotional impulses acquire the key role in facilitation of motivational elements of children’s occupation with computer games (especially those of boys). In the present research, 82% of the participants believe that they like computer games for its exciting and emotional elements. Furthermore, 77% of research participants believe that computer games obviate their sense of loneliness and assist them to wean away from their routine problems. 70% of participants occupy themselves with computer games so that they could relax and reach inner peace. It is worth mentioning that 60% of participants regard computer games as their coping mechanism against agitation and indignation. In one of Olson’s researches in 2007, it is reported that those children who regard computer games as their coping mechanism against anger choose significantly computer games which are more aggressive. In another study (Olson et al., 2008), the relationship between agitation and video games is analyzed. In another study (Cragg et al., 2007), it is deduced that both adolescents and adults seek refuge in computer game platforms for subduing their anger and indignation. Interesting findings of Funk et al. (2006) indicate that university students regard computer games as coping mechanisms against daily stresses and agitations. At the same time, such motivational element can not be observed in children’s occupation with video games.

Fig. 1: Agreement percentages for psychological motivations for playing computer game
94% of research participants believe that video games can acquire more efficient consequences and the least detrimental outcomes and can be utilized as an entertaining element in their leisure time. 67% of participants believe the computer games can be regarded an activity for the periods of their physical and mental tedium. Hoffman’s and Nadelson’s study (2009) depicts that even when computer gamers fail accomplishing successful result, their positive composure is preserved.

**Intellectual Motivations:**
In comparison with other entertainment media (e.g. television, radio networks, books), computer gamer should acquire a much more sophisticated level of composure in instances of their unsuccessful results in computer game platforms. Furthermore, a professionalized level of dominance over installation of gaming software applications and their controlling and monitoring variables are required from computer gamers. With each new game, new monitoring and communicative parameters are represented as professional challenges for enthusiastic computer gamers.

In Klimmt and Hartmann’s study (2006), a group of boy participants are asked of the particular motivational element in computer games that makes them play computer games more than once. They answer that the challenges of gaming interfaces play the key role in making their occupation with a particular game excessive. They believe that an easily played computer game with no mental and temporal requirements in its problem solving procedures cannot be regarded entertaining. Therefore, computer games are designated in different levels so that novice and professional gamers can be included.

Progressive motivations in gaming statuses, regulations, mechanisms and power relations can be regarded instances of gaming success for computer gamers. Cragg et al. (2007) and Hoffman and Nadelson (2009) believe that gaming challenge is the key in BBFC, British Board of Film Classification.

**Facilitation of Creativity:**
In the present research, 68% of participants believe that most computer games provide interfaces in which gamers can generate creatively new contents. In a national telephone survey of 12 to 17 years old adolescents in the United States of America, it is reported that 36% of boys and 20% of girls utilize new contents creatively in their gaming interfaces (Lenhart et al., 2008).

Steven et al. (2008) analyzes children while they are occupied in their personal modification of gaming interfaces. They conclude that in a game such as “Zoo Tycoon”, a female gamer endeavors to facilitate efficiency of zoo environment while another female gamer facilitates engineering and aesthetic infrastructure of the zoo. In Beale’s and Bers’ opinion (2009), even very young children can showcase their creativity and self-confidence of motor skills in virtual gaming systems.

**Sense of Curiosity, Discovery and Learning in Virtual Entertaining Interfaces:**
Utilization of improbable activities in virtual gaming interfaces can be regarded an attracting element of computer games. In the real world, people are generally restricted by a series of social limitations. In Cragg’s study of adolescent students in BBFC in 2007, it is depicted that most students talk about their experiences in virtual gaming interfaces rather than their experiences in the real world. In Cragg’s opinion, gaming interfaces distance their participants from the real world experiences and responsibilities so that they could feel no sense of regret even when they fail in their gaming performances.

**Sense of Discovery and Personal Preferences:**
more than half of the participants of the present research believe that they cherish the sense of discovery of new things in gaming interfaces. Furthermore, more than 67% of research participants believe the computer games can be regarded efficient opportunities for facilitation of their learning skills.

**Pleasure of Gaming Challenges:**
In the present study, it is depicted that gaming challenges and the possibility of closure by accomplishing gaming objectives are the most important motivational element in boy’s occupation with computer games. More than 66% of research participants depict signs of mental agility when faced with gaming challenges and 25% of them confess to the very fact of their willing mental agility against gaming challenges.

The aforementioned results are in direct correlation with BBFC descriptive research. In their study, it is depicted that boy participants speaks more about their gaming achievements and bluffs than the game itself. Furthermore, this study indicates that in comparison with female gamers, male gamers acquire higher level of preference of gaming interfaces due to its potentiality of social remuneration and it subsequent discussions about gaming techniques, accomplishments, collaborations and failures. Greenberg et al. (2008) surveys a heterogeneous statistical sample which constitutes various age groups and educational levels. They deduce that gaming motivations differ in various age groups and educational levels. For instance, 8-11 grade students acquire much more intensive coping strategies than fifth grade students.
Computer games have become a mean for boys’ social performance and compliancy. Hey believe that through mastering gaming skills of a particular computer game, they can establish a distinct social position among their peers. In the present research, 70% of participants occupy in computer games so that they can maintain their synchrony with modern updates. In Tarrant et al. study (2001), 149 14 to 15 years old male students are included. In their study, it is deduced that mastering computer skills and games has become a social value among the studied sample.

Allure of Anger and Violence:

GTA is one of the most famous computer games among adolescent gamers. Although there is no instance of violence against animals or children in the content of the game, its interface encourages violent and disorderly behavioral codes. Most parents are worried of deep involvement of their children with such violent games. For instance, playing the role of a virtual serial killer or an assassin in a computer game could become a virtual training course for serial killing and professional assassinations in the real world. Of course, Olson studies in 2010 depict that the depth of such negative impacts is much less than parents’ solicitous concerns. In numerous studies, the effects of violent gaming interfaces as a motivational element in children’s occupation with a particular computer game are studied. Markey (2010) believes that if nonviolent games represent intellectual and pleasurable challenges for gamers, they could acquire equal level of acceptance as famous violent computer games.

Olson et al. (2008) asks their research participants of their preference of violent gaming interfaces. Some of them answer that a series of particular gaming features are much more important than the very violent nature of gaming interfaces; they believe that through such virtual features, they can attain improbabilities of the real world. Others answer that utilization of particular challenges and violent conundrums make them enjoy such violent games. In another study, Olson et al. (2009) conclude that there is no meaningful correlation between children’s violent behavioral characteristics and their occupation with violent computer games.

Conclusion:

In comparison with other entertaining media such as television, books, movies and radio networks, computer games acquire high level attractiveness due to their social, intellectual and emotional potentialities. Computer games are regarded intricate but as the same time accessible instrumentations in different modalities. According to Stevens et al. (2009), computer game developers should not focus their attention on gaming attractiveness and motivational elements solely and crudely. They believe that personal, physical and social characteristics of adolescent gamers must be identified in various gaming circumstances (Olson, 2010). Westwood and Griffiths (2010) believe that structural features of gaming interfaces such as graphic auditory characteristics, temporal duration, progression pace, monitoring capacities, gaming agility, gaming characters and designation of winning and losing possibilities must be considered efficiently by computer game developers, since all of the aforementioned structural features can effectuate gamers’ compliance and utilization of computer games. Greenberg et al. (2008) believe that children’s cognitive developments affect the level of attractiveness of gaming interfaces.

It is suggested that parents master gaming skills so that they can acquire an understanding of positive and negative consequences of various gaming interfaces (Klimmt, 2009). Through such interactive procedures, efficient monitoring skills can be facilitated. The present research suggests that gaming consoles and computer sets should be positioned in children’s bedrooms, since such a positioning will leave their excessive occupation with violent computer games unadministered. Positioning of gaming consoles and computer sets in less private sections of home allow parent to exercise their indirect and direct administration so that negative repercussions of computer games, such as indignation, violence and emotional sensitivity, can be recognized and obviated.

Villani et al. (2008) believes in inversion of roles of parent-child, parentification. He deduces that parents should show interest by asking them about computer games and their techniques. Through materialization of such an attitude, computer games are not regarded as entertaining instrumentations only and children do not feel an indifferent attitude towards their interests and professional knowledge of gaming interfaces.

REFERENCES


