An empirical study on vocational school students: games experience and success relation

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Abstract

Within the scope of this study, games playing experiences of vocational school students is examined to specify the most favored video game classifications that were played as a technician candidate and its contribution to their education. A questionnaire methodology is chosen and questions are randomly distributed to the vocational school students. This technique is applied to 221 technician candidates to work out their past video game preferences before becoming a member of technician department. The analysis of the questionnaire results indicates that the top three games classes in the interest of vocational school students are: Strategy, Sports and Simulation. But then, it is also ascertained that the less played types are: Art Games, Action – Adventure and music games. Moreover, results of the analysis are compared with the students weighted points. Outcomes are striking that there is a stable correlation between the students playing strategy games and their success points..

Keywords: Video game types; vocational school students; past video experiences

1. Introduction

Computer Games (Cg) have increasingly been favored as crucial and static part of human life in today's world. Various types [1] (Table-1) of Cg are played by people to feel relaxed and to spend their free time, which in turn leads to progress in human behavior, daily life activity and professional behaviors. For example, some researches assert that there is a strong correlation between game playing and surgeons' laparoscopic and endoscopic skills [2-7]. Furthermore, hand skills benefits, playing a video games can improve other human skills acting as perceptual and cognitive [8], flight performance [9], and different attention and working memory talents [10]. This is because of playing Cg needs not only a keyboard and mouse devices but the talents such as hand-operated dexterity within the basis of controlling three dimensional objects by dint of a screen.

Within the scope of this study, to research the effect of playing so-called strategy video games to the vocational school education, one should focus on the loyal game playing experiences of students. In order to work out the relationship between the points of success of vocational school students and their past game playing background, a randomly distributed questionnaire method is applied to 221 vocational school students. In the light of results collected, it can be inferred that it will be a good idea to include the game playing based education systems in vocational school student formation. This study can also be regarded as a motivation item for creating awareness concerning the future of game development places and all educators.

2. Literatur review

Cg have been developing for humans to have funny times; but, their effect to human behaviour and talents are not very clear. Different researches have reviewed those consequences of the game play practice [1,2]. Some of these studies have pointed out the negative effects such as negative behaviour and

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adverse cognitions on the human body and daily life activities [3]. On the other hand, other studies have demonstrated some advantages of video game

playing just as analytical action skills of human brains [4,5].

Table 1. Video Games Genres [19]

Process	Platform Games, First Person Shooter Games and the other shooter games, beat them ups.
Process- Adventure	Stealth Game, Survival Horror, Metroidvania
Venture	Text Adventures, Graphic Adventures, Visual Novels, Interactive movie, Real-time 3-D adventure
Role Playing	Action RPGs, MMORPGs, Roguelikes, Tactical RPGs, Sandbox RPGs, Fantasy etc.
Simulation	Construction and management simulation, life simulation, vehicle simulation
Strategy	4x Game, Artillery game, RTS, MMORTS, Real-time tactics, Tower defense, Turn-based strategy, turn-based tactics, wargame
Sports	Racing, Sports game, Competitive, sports-based fighting
Others	MMOGs, Casual Game, Serious Game, etc…

As mentioned previously there is not a certain decision for Cg usefulness. Notwithstanding, some deep researches have demonstrated the improvement in visual capabilities [6-9] and financial attention [10-12]. The needs of being a reputable technician likewise comprises the personnel talents: sharp visual ones and selective attention capabilities. Those talents can be improved by playing computer games that involves brain storming and decision making views.

Figure 1. SimplePhysic [13].

There are discrete number of game studios that develop games like before indicated scenes and contents [13-14]. Moreover, same games should be improved for effectual educational systems of technician and technicians' disciplines; because, Cg based educational system integrated with in mechanical content offers great advantages [15]. In like manner methods, have been studied by Business development scientist and strange results were obtained as forcing students to think about processes in new manners, and changing their learning of context and their relations with each other [16-17].
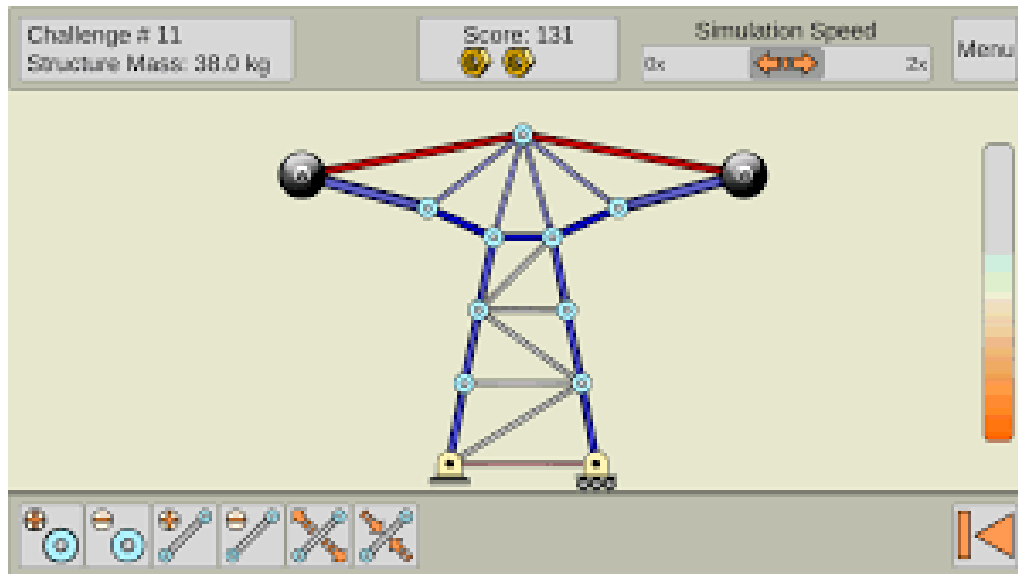
Figure 2. Trust Me [14].

3. Research method

Relevant research articles and reports were evaluated and 6 main game genres were considered as Action-Adventure, Strategy, Sports, Art Games, Simulation and Music games and integrated with the questionnaire design. The questionnaire was applied to 221 technician candidates. Participants were answered the questions and explained their opinions concerning the gaming behavior and success point information. Afore the commencement of the statistical analysis, the questionnaire results are arranged as per their gender as follows (Figure-4, Figure-5, Figure-6, Figure-7 and Figure-8):
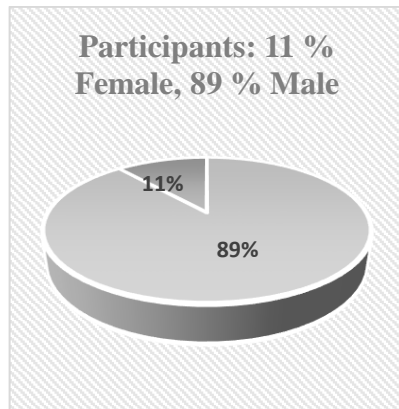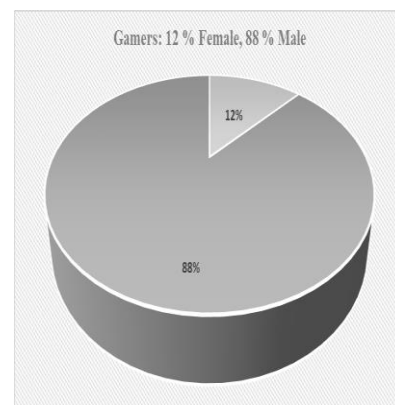

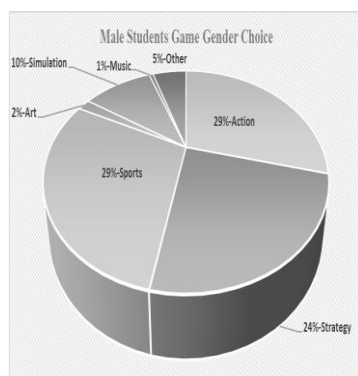Figure 4. Participant Quantity.

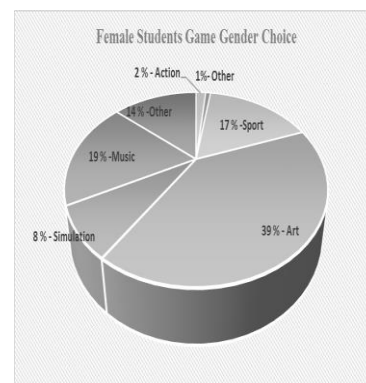Figure 5. Participant Gender.

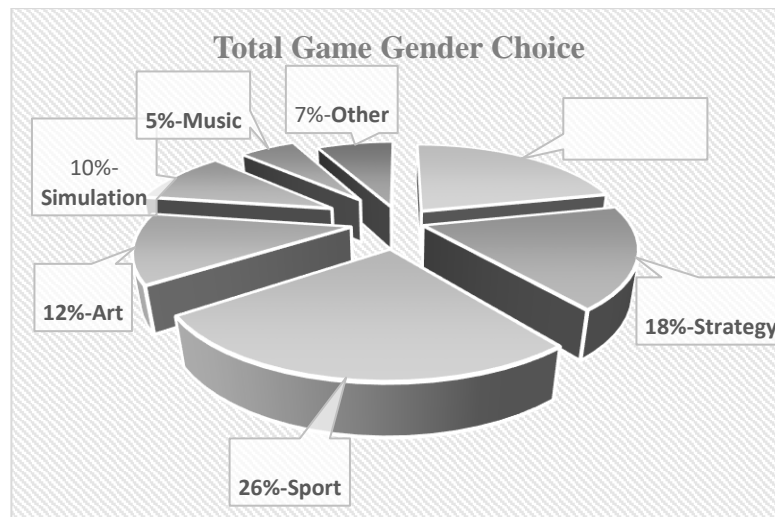Figure 6. Males' Choices.

Figure 7. Females' Choices.

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Figure 8. Game Gender Choice Percentages.

4. Statistical analysis

Histogram analysis was applied to find out the relation between grades and game playing experiences. In this analysis step, total number of gamer student and non-gamers are included disregarding their genres. Analysis results are seen from following figures (Figure-9, Figure-10, Table-2 and Table-3):
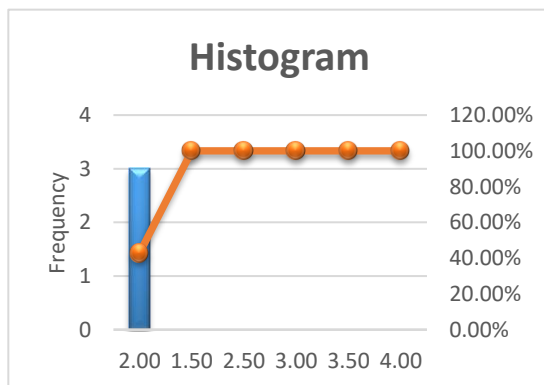

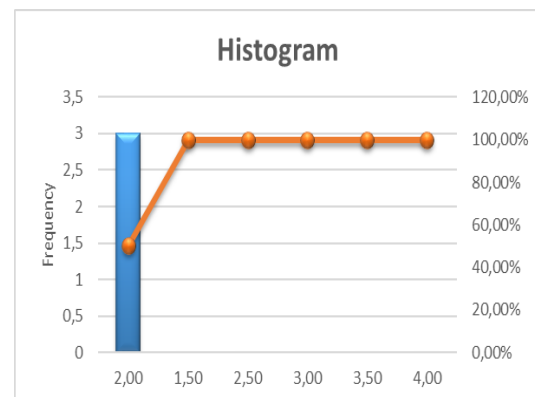Figure 9. Gamers Histogram Analysis.

Figure 10. Non-Gamers Histogram Analysis.

Table 2. Gamers Histogram Analysis Results

Bin	Frequency	Cumulative %	Bin	Frequency	Cumulative %
1,00	1	14,29%	2,00	3	42,86%
2,00	3	57,14%	1,00	1	100,00%
2,50	0	57,14%	1,50	0	100,00%
3,00	0	57,14%	2,50	0	100,00%
3,50	0	57,14%	3,00	0	100,00%
4,00	0	57,14%	3,50	0	100,00%
Other	3	100,00%	4,00	0	100,00%

Table 3. Non-Gamers Histogram Analysis Results

1	Frequency	Cumulative %	1	Frequency	Cumulative %
1,50	0	0,00%	2,00	3	50,00%
2,50	0	50,00%	1,50	0	100,00%
3,00	0	50,00%	2,50	0	100,00%
3,50	0	50,00%	3,00	0	100,00%
4,00	0	50,00%	3,50	0	100,00%
Other	3	100,00%	4,00	0	100,00%

5. Results and discussion

221 technician candidates were participated the questionnaire, and 11.3 % of whom are female technician candidates. As per the figure 7, female participants preferred top three game genres as Art, music and sport games. For male gamer students, first preference is sport, and action comes second and the third one is strategy games (Figure-8).

In line with the histogram analysis outcomes, there is a strong correlation between the student success point and their past game playing experiences. Student brain analysis and action skills could be improved due to their past gaming background and with the aid of these skills, their concentration to engineering lessons could be well enough to get high grades [18].

Based on the research results, the following outcomes are suggested to increase learning rate of students, and game studios perspective to engineering education:

- •Game and simulation based educational systems can be developed and integrated to technician education to increase understanding rate and practice of the students.
- •Game developers can improve their simulation games by collaborate with educators [18].

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