Using Computer Games Features for Foster Creativity

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A B S T R A C T

This paper reviews the capabilities of computer games in fostering creativity. Computer games have the potential to foster the creativity. Today Computer Games are most popular entertainment of the people and it is one of the tools in the instruction that have noted by experts. In this paper, first discuss about computer games and their features that this features are fit for foster the creativity. Through the unique features of computer game can introduce computer games as a medium for foster creativity. The second discuss is about the creativity and his importance in education. In Information explosions age we need the creative individuals that can learn independently. Computer games is one of the new technologies to be used in foster creativity therefor there are some challenges to be discussed in this article. At last we present few suggestion for the computer games design in order to foster creativity.

INTRODUCTION

Play is the most natural means of teaching children, children learn through play, discovered new things and objects properties[1]. Experiences of pre-school children are summarized in the play. Children learn concepts such as quantity, distance, number, space and shape by the play, play is a most serious and effective child's action. Computers can be used to enrich the environment and facilities of play [2]. According to the facilities of each age some games have been exist, and today it has own characteristics and in this period of time computer games are more popular than other types of games [3]. Although at first computer games started to work on a very basic level and very simple, but value of the games to fill leisure and entertainment children, adolescence, youth and even adults and commercial uses in them gradually received more attention and this games was developed with advanced technologies[2]. Creativity has long been one of the world's educational goals. One of the basic human ability to resolve problems and needs is creativity. Today, due to the complexity of lives and progress communities, we need to foster creative people[4].

COMPUTER GAMES

Every time some games were considered, today computer games at each country have millions of users. The last decades of the 19th century are the inception of video games, First video game was "Space war" that designed and produced of "Massachusetts Institute of Technology's", in 1970, the design games exit from monopoly's college institution and enter to game Clubs. The first personal computers bought by enthusiast's video games[2]. The graphics, color and movement in computer games caused we can use this games in courses, such as biology, geology, physics[5]. Computer

games have some characteristics that are suitable for education specify for fostering creativity, some computer games allow users have freedom to act, this capability is one of the most important elements in fostering creativity[6].

Attraction secrets gaming computer

Computer games designers are trying to design the game that have been so fascinating, diverse, exciting that not only computer games, continue to life also become to the top media that get back in competition with other media[7]. Hence in an effort to remain these games attractive, psychological strategies during product games have been considering by game designers[6]. Manteghi (2007) state some of the attraction secrets of computer games:

a. Start exciting games

Many of computer games have amazing characters and scenes in the beginning.

b. Engaging user with game

Users at the beginning of the game faced with many choices and after select hero, car, space and stadium and weapons, start playing. Since each user has a role to select the details will continue the game in new form.

c. Diversify game

Designing games with a variety of personalities and stories according to the interests of different people is one of the important matters that attended in design games. Variety of games, covering different interests, and they attract the audience.

d. Attend to the excitement of adolescents and young adults

Games with create exciting scene trying to respond to the excitement of their audience.

e. Try to satisfy curiosity and adventure feel

Curious young and adolescents in dealing with mentally challenging situations feel that should be made to pursue that issue and be aware of secrets. The computer games are full of challenges.

f. Attend to the dimensions of the art graphics and effects

Another important feature of the games that considered is beauty of art used in the games that tempted many users that following stages and enjoy from the beautiful art processes of the game.

g. Developing arena games

Games entrance to the realm of toys, movies, literature and this subject has provided a recent exchange between these fields. Those will double the charm and popularity computer games.

Educational aspects of computer games

Computer games are introduction to the computer literacy[2]. Computer games have attracted the attention of children to the learning and provide opportunities to the language learning, also they improved decision-making skills and are a good educational tool for hyperactive children[3]. In a study with entitled "Designing computer games and education" noted that the game excite users until spent some time to mastering specific skills in the game, we can manipulate game key elements (such as narrative, content, goals, rules) until make easier and faster learning for users[2].

CREATIVITY

To progress and move to future and solving problems and difficulties in the information explosion age we had to foster creative personal[6]. Since creativity is potentially in all human beings and it can be fostered by using various techniques[8]. Gilford American scientist presented the most comprehensive theory of creativity in 1959, he believes that creativity is one of the main aspects of thinking. Thinking is a process of rearrangement or change information and symbols acquired of long-term memory, in other words, the activities directed mind for solved problems[8]. People who have divergent thinking in thought and action are different from other people and apply new and creative ways for difficult and problems. Conversely, individual that don't have these characteristics are convergent thinking. These

people use habitude at their daily tasks[9]. Robert Sternberg and Linda O'Hara (Quoting by sadeghimalamiri and raeisi, 2010) have identified six elements that affected on the creativity peoples:

a. Knowledge

Basic knowledge in a field, experience and expertise that acquire in many years.

b. Intellectual ability

The ability to provide creative ideas by redefinition of the issues and make new connections between problems.

c. Thinking style

Individual creativity impact by thinking styles.

d. Motivation

Creative people are generally motivated to act their ideas.

e. Personality

Creative people generally have characteristics such as robustness against external and internal pressures and have an independent personality.

f. Environment

Generally creative people growing in the supportive environment areas.

COMPUTER GAMES ANS FOSTERING CREATIVE PEOPLE

Fantasy game is one of the most important ways that preschool children learn through them about their environment[6]. These games can expand children's vocabulary and increased children focusing, imagination in fantasy games has positive effect in fostering creativity[3]. Researchers have examined the group works impact on the development of creative process and concluded that creativity of people by working together with interact of ideas flourished[10].

Fantasy game: The game is synthetic of belief and imagination. Children in fantasy game add something to their position, they willing or

think that some facts existing while that not true. Fantasy games are important because: 1-Fantasy game help to develop thinking and language. 2- They help children until understand others. 3- This games will reinforce creativity. 4- They help children until recognize themselves[1]. Computer games have some of the characteristics (flexibility, being fluid, problem solving) that came in the definition of creativity. Some researchers have focused their attention on this subject that computer games can encourage the creativity[7]. A study with title "relationship between electronic games and elementary school children creativity" showed the significant difference between children that use of video games and children who didn't use these games in the amount of creativity[2]. Putting users together for a common game, creates rainfall thought for users and providing the possibility for creative projects[5]. Macalister *et al* (2004) reported that during the game that they provide for players, users were forced to exchange ideas with each other. Subsequent studies showed that members discusses, add to them critical thinking and reasoning presented. Since some of computer games have a flexibility and don't have a clear structure can foster creativity, because users have freedom of act and they can present several response for status, this property is one of the most important factor in developing creativity. Examples of these games are: assortment games, face layout, painting, make short films and music's and etc[2]. Fiction, painting and making different things by their composition are practices for increasing creativity[4], that there are these practices in most of computer games To foster creativity individual should face with real situation and problems or situations that are like the reality without real dangers and pressures, until person can faced with this situation and problems without stress and can find different answer for this situation and problems[12]. This capability called brainstorming that is a best way to foster creativity. These traits can be considered when computer games designing and building. In most of computer game users faced with situations and problems that are like the real world[11] and user can faced with them without any danger threatened him and can test different answers

easily and without any expense and user can act this work again and again[7].

CONCLUSION

Today computer games have entered widely into people's lives especially children, teens and youths and most of them spend some of their time with playing these games. Therefor we can use these games for the growth users and we can use these games in learning and instruction. Since computer games have some features that are suitable to foster creativity, we can use some of these games for fostering creativity. For fostering creativity by computer games we should consider some points in the designing and building these games .In other words, we should identified points that is important in fostering creativity and consider this points in the designing and building computer games that are specific for fostering creativity. Faced with an issue that is like real world, the relative freedom in offered various answers without any pressure, use from problems that have several answers, attractive problems and etc are conditions for flourishing creativity. Computer game can create these conditions, only we should consider these points when designing and building computer games. If we considered these points in computer games, these games can become a suitable tool for fostering creativity. In some of resource such as 2, 3, 5, 6, 7, 11 and 12, authors a researchers point to some computer games traits that can be useful for education and also pointed that this games have this potential that can be used as an instruction tools. Based on this background and regarding to theirs characteristics such as the relative freedom in offered various answers without any pressure, use from problems that have several answers, attractive problems, attractiveness and popularity among people and similar to the world and her complexities, computer games have this potential that foster creativity, of course if this traits at computer games be respected.

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