Elaboration of Educational Children's Computer Game for English Language Studying Purposes

Mariam DEDABRISHVILI*

Abstract

This paper describes the role of educational game for children, using a Cartoon layout format which appears to be an effective tool for attracting the youth. This work is for language studying purposes and contains grammar, spelling, vocabulary, sentence structure sections. From the game, children will not only be familiar with picture scene which stimulates their visual activities but they will also develop their brain skills with logical thinking. The game itself consists of several modules adapted to suit children of ages 8-12.

Keywords: multimedia, education, adventure, game engine, effective methodologies, learning through play.

Introduction

The use of the English language is increasing all over the world, as it has been increasingly used as the International lingual Franca for communication. In the last two decades after the independent of Georgia from the Soviet Union, the country's political orientation starts leaning towards the North.

Georgia and Europe first established contractual relations in 1996 through a Partnership and Cooperation Agreement which entered into force in 1999. On this basis, the EU-Georgia European Neighborhood Policy Action Plan (ENP AP) was approved in November 2006 for a period of five years. In 2010, the EU and Georgia held meetings of the Cooperation Council, the Cooperation Committee, and subcommittees on trade, economic and related legal issues and on justice, liberty and security issues, plus one round of the EU-Georgia dialogue on Human Rights (Europeans Commission, 2011, May 25).

All these Georgian Political objectives and partnership with the USA augments the importance of English in our country. The Georgia Ministry of Education and Science made decision about English language and it has to be started from the first grade in the schools. It means children will start learning English at the age of 6. Adults clearly understand that if they want to be successful they need good English skills. It is necessary for their good education abroad, for international relationships, for their career and finally for country's development.

Definition of the Problem

Reading books, catching and remembering new words from movies and music are ways of learning fluent English. But what is the role of games in education? The effectiveness of games in education becomes more and more evident. (D. Moursund 2006) professor of education at the University of Oregon, asserts that "games provide a type of learning environment that can help foster general learning applicable in a wide range of problem-solving situations". It plays a huge role in children development, every child love playing games. It therefore provides an audio, visual and participatory kind of approach to the children's learning capabilities.

Interactive video and computer games belong to the new multimedia culture that is based on the digital computer technology. These games have become increasingly popular in the past 20 to 30 years, especially among youth. Video and computer games became a matter-of-course in their everyday life. This cultural and social significance of electronic games is also pedagogically relevant, because any educational or teaching effort which aims at mediating so-called "media competency," computer literacy, or ICT (Information Communications Technologies) skills is preceded by informal and non-formal learning processes of children within their "computer gaming culture." About 20 years ago Patricia M. Greenfield discussed possible effects of new media (Applied Developmental Psychology, 25 (2004), 627-631).

She was skeptical about common fears that new media were bad educators, because they "taught" children and the youth things like violent behavior. Greenfield was one of the first scientists who drew attention to the possible positive effects of watching television or playing video games. She addressed new media as cultural artifacts which demand complex cognitive skills from the people who use

*Mariam Dedabrishvili is a research assistant of the Computer Technologies and Engineering faculty and a Master student at the International Black Sea University. mdedabrishvili@ibsu.edu.ge

them, and these skills and the related knowledge that come from using them are not obtained in instructional contexts like schools, but are acquired informally.

Since 1984 the situation obviously has changed in one respect: schools have begun to use computers and teach pupils computer skills. But at the same time informal experiences with computer technology have become more common for children and young people. "Electronic games" was used as a collective notion for computer games (PC games) and video games (television-linked consoles and portable video game systems). On average children and young people between 6 and 16 in Europe spent 32 minutes per day playing electronic games, 17 minutes per day using PC applications (not games) and 5 minutes per day using the internet. To give a comparison: 136 minutes per day were devoted to watching television). The figures varied between the different countries (see fig. 1), but in all countries (with one exception) more time was spent on video and computer games than on the other types of computer use.
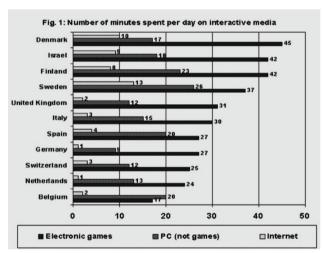

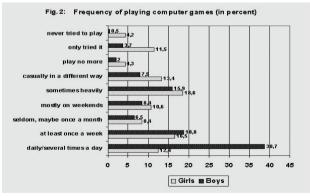**Figure 1:** *Note. Data from Beentjes et al., 2001: 96*

Figure 2: *By Fromme, J*

On the whole video and computer games seem to be a matter-of-course for most of the children. But there are

significant gender differences here - and in most other areas of the study. (fig. 2) Boys play more often and more regularly than girls do. This indicates different media use styles, and to some extent different leisure preferences of boys and girls.

When children asked about their favorite games boys and girls showed different preferences. As the different types of games represent different contents they reflect well-known gender differences with regard to relevant interests (fig.3) (The international journal of computer game research, 3(1), 2003, May 3)
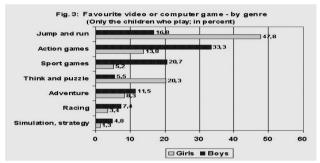

Figure 3: *By Fromme, J*

Governments and Educational ministries of many countries understand the meaning of games and they started creating educational games. The field includes more of mathematics, geography, literature and etc. than others, for instance language learning games. There is the possibility to find only spelling or only vocabulary games, but together with adventure and all grammatical elements that will be fun and more attractive to children is hard to find.

From previous scientific papers written about educational games, there was no suitable work for the Georgian environment. With these in mind, we decided to create a game which would be more relevant, suitable to all gender, be interesting to all users and contain the most important things from the pedagogically point of view.

Methodology

The code of the game is written in Action Script, animations and pictures are done in Adobe Flash program. As a game layout we took great art work of Lewis Carroll "Alice's Adventures in Wonderland". The goals of the game are: to summarize language knowledge, to pick up new words, to develop critical thinking.

● The game is compatible with the 5th-6th grade students' level and it helps students to generate practical language as well as become familiar with IT skills.

● Main characters of the game are Alice, Rabbit, and Cat (Cosimo Classics, 2010, March 1)

● The player of the game has to return Alice into the real world from the wonderland, also to get maximum

scores during the game.

● At the beginning of the game user enters his/her name into the special field. User name is saved and at last is shown to user with the taken score together.

● On each page of the game there is a mushroom which calculates scores. Two scores are guaranteed to each question. In case of incorrect answer user has 0 point.

● After every finished tour, a smiling face of cat (Cheshire cat) is showing up (as it is in the cartoon of Alice).Instructions are given with rolls and note cards.

Game has seven stages, these stages differ in difficulties. We have chosen such activities that are close to 8-12 years old children level of development, these activities cover new words, spelling, word classification, logical thinking and understanding; also grammatical part which measures children knowledge about Present Simple, Present Continuous and Past Simple tenses.

Next activity checks children knowledge about word ranges, (Synonyms and Antonyms) and the last one is about sentence composition, how to make up sentence right way and summing up their orientation on knowledge and logical thinking.

At the beginning of the game, there is a book, where the famous phrase of Alice is written "what is the use of a book without pictures or conversation?" Then Alice fells into the hole and she finds herself very little in the wonderland. Given instruction says: Help Alice to grow again and find the way back!

Activity I: Match the animal pictures with the words.

Instruction of the game: pictures and words are coming randomly. Words have to be drag and dropped under the suitable pictures. After finishing the activity Alice goes to drink from the "Drink Me" bottle which is on the table. She grows and cat face comes (As a symbol of finished tour).

Then Alice becomes so huge that she wept and wept and she grows smaller and smaller then. Soon she found herself in the pool of tears. Now she needs help. User has to fulfill the task to help her. The task is as follows:

Activity II: Click the word which is spelled correctly.

As the game instruction shows, from given 3 words user has to find out which one is spelled correctly. After this task Alice goes to nature for getting dry. To get Alice dry user has to do next activity:

Activity III: Put the words into the right box.

Game instruction: Two boxes with pictures of Good and Bad weather are shown. Student puts words into the right boxes.

After this Alice will be stuck into the rabbit's house. Now Alice needs to come out again and keep looking for real world. For this, user finds rabbits according to questions.

Activity IV: Find the right rabbit.

Game instruction: on the stage there are 7 rabbits which have different size and shape. Student will decide logically which rabbit is correct for the given question.

After this tour Alice has to answer the questions of the Cheshire cat. - „There was mouth enough for it to speak with. Alice waited till the eyes appeared In another minute the whole head appeared"… To move to next stage right verbs have to be put into sentences.

Activity V: Put the right verb.

Game instruction: from 3 words one is suitable to sentence, user needs to drag the word in to the empty space of the sentence. After finishing the tour, Alice finds herself at the Tea Party, where she cannot understand the strange speech her hosts. As user writes the task, he/she helps Alice understand the speech.

Activity VI: Find synonyms and antonyms for the word.

Game instruction: there is a tree, which has some words on its leaves. Student finds synonyms and antonyms of given words.

After the task, new problem comes: Alice is blamed for stealing tart. Student has to help Alice be free from the judge and also help her find her way back to reality.

Activity VII: Make up sentences.

There are several words which make up the sentence, but they are randomly positioned. User has to guess how to get correct sentence by moving the words.

After the end of the game one roll comes, this gives signal to user that Alice has passed all the difficulties. On the last frame of the game Alice returns to real world!!! Nearby there is mushroom which keeps the final score.

● If the score is up to 40 "---- Try better next time", will be written,

● If the score is about 80 – "Well done -------, try to be excellent",

● And if the score is more than 80, "Excellent, ------!"

In the right bottom part of the frame user can find little button with text "Play again".

Results and Conclusion

Video games and computer games are becoming more accepted in the school environment. According to game researchers Young, M., Schrader, P. G. , Zheng, D (American Education, 2(2004)), many of today's students spend more time playing video games than they do watching television, reading books, or watching films. Some Personal Thoughts about Research on Using Games in Education, (D. Moursund 2006) states that because most students have an element of expertise in electronic gaming, their capacity to learn in that realm will be higher than in a typical classroom setting.

The most important element of the game is to be at-

tractive for users. On this bases lovely cartoon environment and joyful adventure with cartoon characters was novelty in the field of educational games. Also the interest in reading novels will be increased after playing this kind of worlds' art work such as "Alice's Adventures in Wonderland".

The Georgia Ministry of Education and Science made the decision to adopt and teach this game at schools grades 5th, 6th and 7th.

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