AN ALTERNATE REALITY GAME IN ENGLISH LANGUAGE TEACHING: THE FOX HUNT

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Abstract— This paper aims to describe contribution of a new genre of game called alternate reality game to English Language teaching and learning as an out of class activities and investigates if such games provide an alternative view to teaching and learning English. This research was conducted with English Preparatory School, Elementary students in Muğla Sıtkı Koçman University. This experimental research proceeded nine weeks. According to findings of the research, although it is a new method in education and needs developing, almost all the students were pleased to involve in the game and thought that the game helped them motivate and improve their English with a joyful way.

Index Terms- Alternate reality game, English language teaching, Game-based learning

I. INTRODUCTION

Against to traditional teaching and learning methods, there has always been a struggle to find out the best way or at least the most desired and motivated way in education. Technological developments have also triggered educational improvements in methodologies, techniques and tools. In recent years, a kind of game was introduced into education called alternate reality game.

Alternate reality games represent a new genre of digital gaming designed to blur the distinction between player's experience in the digital world inside the game and the real world outside the game [2]. ARGs mostly make possible to solve the puzzles only by working in a group [1]. Depending on demands and the budget, ARGs can be designed both lasting for months for mass group of players with big budget and in limited time and platforms with much lower budget. Because of the flexibility of ARGs, it makes it easier to be into education.

The first known ARG was designed for the advertising campaign of the film called "Artificial Intelligence" (2001) by Steven Spielberg. "The Beast" which is the name of the ARG started with hidden clues in the movie posters that aroused interest of public and people in United States began the game in both real and virtual world, to have information and solve the puzzle related to the [2].

Increasing in curiosity of people because of the mystery, appeal and flexibility of ARG attracted educators. Innovative educators applied ARG in different educational subjects such as history, foreign languages and computer science education. One of the most known educational ARG is "The Tower of Babel" designed by Connolly, Stansfield and Hainey (2011) to increase the motivations of the students throughout Europe in learning of modern foreign languages. Beside this project, eMapps (2006), (ARGOSI) project (2008) and 'Finding Identity' (2010) are the other examples of educational ARGs in literature.

Educational ARGs support collaborative working and improve students' problem solving skills. Learners are involved in the game actively, which provides the students learning by doing. ARGs offer authentic context and goals in real and virtual world (Whitton, 2008). Furthermore, those kinds of games can be seen as constructivist-learning environments enhancing the students to progress individually in learning process (Whitton, 2007). In this study, it was aimed to describe how to implement an ARG to English language learning as an out of class activities.

II. METHODS

The ARG was developed and implemented with the participation of 50 students studying in Elementary class, English Preparatory School of Foreign Languages, Muğla Sıtkı Koçman University, in the first semester of 2015-2016 academic years. This research was designed as an experimental research, in which pre and posttest questionnaires were implemented. The game which is called "The Fox Hunt" was designed by the researcher as a detective story. The game lasted 9 weeks and took place partly online and partly in campus. Beside the questionnaires each week, the participants were requested for feedback on the game by an online survey consisting of open-ended questions. Surveys provided formative and summative evaluation of the game so that it could be seen which worked and which didn't during the game and after.

III. PREPARATION OF THE GAME

During the preparation of the game, related literature was reviewed, game story, puzzles and clues, web site of the game were created and a pilot application was implemented.

A. Literature Review

In the first phase of The Fox Hunt, which was designed as an alternative reality game, the literature

was reviewed. The games designed for education and commercial purposes in Turkey and abroad have been examined and tried to obtain information about the structure of ARG. Small-scale and large-scale designed games, used puzzles and clues, communication tools and games were scanned.

B. Game Story

The students were English preparatory school students aged between 17-20 and mostly boys. According to participants' characteristics, it was decided to fictionalize a detective story. Characters were selected from different episodes, which are famous all over the world. In this way, it was aimed to make students easily attractive and familiar with the game. The game story took place in Muğla. The game story was briefly that The Kelvin Genetics research center established a laboratory in Mugla where it could conduct secret experiments. After an explosion had occurred in the lab, two scientists were in the coma. Then, a new laboratory team was sent to Muğla research center. Events started by reporting that suspicious two people followed the new team. Detective Walker was assigned for this. Detective Walker asked for help from people who know Mugla well in order to identify these two suspects and to learn their purpose. In accordance with the story of the game, the game was called 'The Fox Hunt' and a logo was created for the game. In Figure 1, the game's logo is shown.



Figure 1. The Fox Hunt Game's logo

C. Web Site of The Game

The Wix web design program, which does not require high design knowledge and is free of charge, was used for website design. The website was designed so that the players could reach whatever they needed during the game. The content of the website included game story, background of the characters, weekly episodes of the game story, game clues, player score table, player photo gallery, blog, social forum and digital classroom. The story of the game was given in seven chapters, each of which was published every week through the website. The event was organized at this stage of the game, but the preparation of the weekly episodes for the site was made during the implementation. In addition, the pages of the player's promotions and the score table are uploaded to the site during the application phase.

D. Puzzles and Clues

To reach the end of the game, students were requested for solving puzzles and getting the clues. The clues that were presented in the game were prepared for both the virtual and the real environment. Posters, newspaper pages, audio recordings are prepared for the clues of the game. Puzzles, maps and sketches are designed in different styles. Many clues have been made at the preparation phase but some additions or subtractions were made according to the flow of the game.

E. Awards

Since the game was not conducted by the lecturers in the Department of Foreign Language Preparatory School program, it was thought that it would be useful to add motivating factors to the students' performance in their tasks or to continue the game. The awards given in educational AGO games vary. It is possible to see various prizes such as ranking in the score table, giving opinion notes for the lesson or giving lecture notes, shopping coupon, cinema ticket (Piatt, 2009). The score table was used in this game and at the end of the game it was thought to give a shopping voucher. Later, it was decided to award small prizes to the first of the week.

F. Pilot Application

Pilot application was made with five volunteer students from Muğla Sıtkı Koçman University, Faculty of Education and English Language Teaching 3rd Grade to test the functionality of The Fox Hunt and to reduce the problems to the lowest level. All parts of the game were tested for 15 days in pilot implementation. Accordingly, the following corrections were made:

- The home page view of the website was changed.
- Weekly chapters were put on the site to allow the event team to continue throughout the game.
- The credibility of the game story was increased.
- The degree of difficulty of tasks was increased.
- Points that were not understood in the clues were clarified.
- Simplified language used in puzzles and tasks.

IV. IMPLEMENTATION OF THE GAME

"The Fox Hunt" started with a letter of request for help sending to the players' addresses. Players who receive this letter log in to the site and start playing. First two weeks, students solved the puzzles and got the clues via website. The other weeks, the clues were located in

anywhere in campus such as in a café, library, staff room, etc.

Tasks were released weekly via sms or WhatsApp to all current players. After a few stages of the puzzle; they solved the week's clue. At the end of the game, they gathered all the clues and found out the suspicious people. In the game students were allowed to work individual or collaboratively. Scores were recorded and published to the players weekly based on completion of tasks, speed bonuses and on website the week's winner was announced.

This game was created especially to improve students' English reading and writing skills. For this purpose, the web site had episodes to read and tasks were purposefully prepared to provide students reading texts. Furthermore, each week students were asked 2 ore 3 open ended questions about the game story. They answered the questions online and the researcher gave them feedback individually about their writing works. Below some examples of questions and the answers of the students are given:

Q: If I were a character in this game, I would be..... because.....

A: If I were a character in this game, I would be Cisco because I'm good at the computer like he.

A: If I were a character in this game, I would be detective Jo because I like to solve problems. I want to find a solution about this problem and I wondering who is criminal.

Q: Would you please write an end for our game's story?

A: When Detective catch the criminal they are shout him and criminal is go other country and detective walker promised to him I will catch you and start second season :) :) :).

A: Astrid was in bomb in there.so I think she is guilty in our game's story. After bomb when she said something, it is not true. She is not very honest but my opinion can be wrong.

A: I don't know. It's difficult to pretend it. But I think two people who went to the lab aren't guilty.

The eight tasks and timeline for the game were designed as shown in Table I.

Week	Activity
Week-1	Launching The Fox Hunt game
Week-2	Detection of 25 suspects by checking the list of passengers and hotel lists given on the website
Week-3	Reduce the number of suspects to 15 with clues given via the website
Week-4	Finding the clue inserted in a book in the library and dropping the number of suspects to 13 from the conference posters on the campus
Week-5	Solving the cipher in puzzle and decreasing the number of suspects to 10
Week-6	Detection of the clue from the voice record, the resolution of two puzzles and the reduction of the number of suspects to 8 with a newspaper report
Week-7	Resolution of a mysterious letter, adherence to the directive on the map, and access to two suspects
Week-8	Communication to two suspicious, access to email correspondence and phone records via sketch, detection of real offenders
Week-9	Final evaluation and celebration party

V. WHAT WORKED AND WHAT DID NOT?

During the first two weeks, students reached the clues via web site. Two weeks' tasks were found hard to solve by the students. The tasks were to find 25 people on the passenger and hotel guests' lists matching and scanning the two lists. Although it was basic knowledge to use "Ctrl F" in pdf, most of the students did not know that. Therefore, they spent too much time to complete the task and get the first clues. This kind of problem made the students unmotivated at the beginning of the game. Especially first tasks of the game should have been easy to solve.

Another first week's problem was that players had to sign up for the web site and the digital classroom. For the beginning of a new game, ıt was too complex to reach the game. It would have been only one entrance of the game.

Familiarity with the traditional education, students found the game complex and did not understand the concept of the game properly. For this reason, games can be prepared plain and simple and gradually increased the complexity of the game.

Because of The Fox Hunt game was a semi-virtual game, students needed internet connectivity. During the game, some students had the internet access problem, which affected the fair of the game. To solve this problem, students are provided by using the computer rooms at school whenever they need.

In the following weeks, clues were gathered somewhere in the campus. The problem was when all the players reach one places to find the clue, it was chaotic that many students were looking for something. The next weeks, it was decided to locate to clues near but not the same places.

Each week students were asked for evaluating the game, according to that evaluation, to be fair and not winning by chance but by knowledge. Some examples of players' feedback on the game are below:

"The game was long enough, flowing and perfect. Everyone was challenged by solving the puzzles which was really nice, but we lost too much time when the groups of the other class took the envelopes

belonging to us. The game was the best game compare to other week's game."

"I think it was like it should be. The puzzles were hard, but I guess the tasks I had the most fun with were that."

"The game was very entertaining this week. We reached to the end of this week's game by following the clues. Playing the game in real life increased the interest of the game."

"There is not much to criticize in the last weeks. All our suggestions were taken into consideration and reflected in the game."

A number of alterations were made during the implementation according to players' comments on the game:

- to send passwords via the WhatsApp, not via sms, to text to all players at the same time;
- sending the code to the researcher to ensure that the clues placed at certain locations of the campus have some code and that the correct person has taken it;
- the placement of clues in close proximity but in different places to avoid clutter;
- to involve more than one stratum in order to reach the clues.

In the following weeks, students got familiar with the game, willing to work collaboratively and developed strategies to solve the puzzle. Playing the game in the real world in campus, increase the engagement and motivation. Most of the students claimed that they learned new vocabulary and improve their English by playing the game. In addition, students found that the duration of the game was short; they wanted to run on the game an academic year.

VI. RESULTS AND EVALUATION

The Fox Hunt game were started to play by 50 students and ended up by 44 students. Since some students left the school and some of them had to work in their free time. Each week, students were requested to evaluate the game by online survey. According to their evaluation, although some problems occurred during the game, students were happy to be a part of the game and they felt improving their English. Some examples of the students' comments:

"Beautifully designed, developing my English and made me think differently. I had a great pleasure while playing."
"It was a fun and educational game for us to improve ourselves. I am happy to be part of this game."
"I loved the game so much that I just wish it was never over. It was fun and convenient for the purpose."
"The game was fun and made us learn English while playing the game."
"When I heard the game first, I had just thought that we played the game from the computer. Then the game became more interesting when I learned that it was a real world game."
"It would have been better if we had triggered a little more critical thinking, but the contribution in terms of English was enormous."
"I like the game. It helped me improve my English and fill my free time. It was very nice that the game was designed as a social activity."

According to results of the questionnaires, 44 students of whom 31.8% were female (14) and 68.2% were male (30) completed the questionnaires. Players' thoughts on the aspects of The Fox Hunt game are shown in Table 1. Students indicated that all the aspects of the game are above good. The most admirable aspect of the game is story with a mean of 4.34 (SD= 0.61).

Table 1. Aspects of The Fox Hunt Game

Aspect	Mean	SD
Story	4.34	0.61
Solving Quests	4.27	0.73
Characters	4.23	0.57
Realism	4.18	0.79
Collaboration	4.14	0.85
Help and Support	4.05	0.91

Posttest questionnaire results show that the attitudes of the students towards ARG (The Fox Hunt) are very positive. 65.9% of the students strongly agreed and 29.5% agreed that they enjoyed playing the game, 54.5% strongly agreed and 38.6% agreed that the game kept them sufficiently challenged, 54.5% strongly agreed and 40.9% agreed that the game was engaging. 59.1% strongly agreed and 34.1% agreed that the game helped improve their language skills, 54.5% strongly agreed and 36.4% agreed that future development of the game could potentially help other learners.

Furthermore, Students believed that ARG helped them obtain and develop the skills included problem-solving skills (84.1%), collaborative and teamwork skills (79.5%), analyzing and classifying skills (72.7%), critical thinking skills (61.4%), creativity skills (52.3%).

The design of the game as an out-of-class activity allowed students to continue their English learning outside the classroom. The teaching of English in the game was thought to be effective for students' motivation to learn in a meaningful context. It has helped them develop their collaborative working skills by recognizing the strengths and weaknesses of each other within the group and developing strategies accordingly in the next games. Their actively participation in the game supported them learning by doing.

VII. RECOMMENDATIONS

Since the design of the game and the development of gaming tools are very time-consuming tasks, it may

not be possible for teachers who already have an intensive schedule to take such a responsibility. For this reason, a few teachers may come together to design such a game or school clubs may be asked to make this design. Practical small-scale games can be designed as out-of-class activities. For example, given assignments or homework can be presented in such a game.

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