“Alpha Champ” Kids Collaborative English Learning Application

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Abstract: One of the most common problems within the present young generation is spellings and grammar mistakes in English language. As a result they will be embarrassed in front of the social. Goal of building this application is to teach toddlers and students in the range of 5 years to 10 years good usage of language. Toddler age is the best age to teach a person something that they will learn it for the life time of their life. Teaching the correct usage of language may help them no to do anything wrong of using language in future as well. Filling missing blanks of words, filling correct words to grammar questions. Such activities might help them to improve their knowledge on the language. Printing based kid activities will help them as well as an application like this helps them to entertain themselves while learning via interactive and visual features. Alpha champ is a simple game where a child can learn English while playing the game. Multiplayer feature will teach kids how to interact with other kids while playing the game. That might help them not to isolate with the technology. Learning a language using mobile (Smartphone) is easy but developing such application for learning purposes are not easy and should be accurate to the point.

Alpha Champ is having an android mobile application that work as a simple gaming application which will helps kids to learn English and learn collaborative learning. Other than just learning with a single player gaming application working with a team will help kids to learn accurately along with the team help.

Keywords: E-learning; English Learning; Multiplayer; Android Application; Grammar; Spelling Mistakes; Toddlers

1. Introduction

English is the most common language that is using in the present where every person to communicate with another person. So it is a must for everyone to know the basics of English language. In the countries where English is not the mother tongue, they find it difficult to learn. Even though everyone learn English in their primary and secondary education still do mistakes such as grammatical and spellings. It is a must to teach correct usage of English at least from the age 5 and also along with collaborative learning will make the kids to remember things easily that they would forget.

It’s being a trend that nowadays people takes help from mobile phone to do every single thing with their life. As a matter of fact they do same thing to learn something such as a language that they don’t know. So learning a language using mobile is easy but developing such application for learning purposes are not easy and should be accurate to the point.

2. Literature review

There are number of research based on technology based language teaching applications.

Evaluating English language teaching software for kids: education or entertainment or both by Zekeria Kazanci is a good research that was done that we can learn how to combine both education and entertaining on teaching for kids. It refers to the word “Edutaining” which is a combination of education and entertainment. According to this computer can enhance learning of a kid and also it can motivate kids to learn about the topic deeply. Our main intension here is the same but there is a little bit difference. Most of the applications we looked in to were single player games where a single user plays the game alone by himself. This might cause the child to isolate along with the technology. To reduce the risk of kids being isolated with the technology we develop this application where at least two children needs to be in a one team and play with another opponent team. This will help them to enhance their knowledge, collaborative learning skills [1].

Software based learning has more visual feature than a printed material and child don’t need to be in
a one place. Since it is software based the teaching will not be more intelligent than real world human teaching. Roles For Computer in Teaching The English Language Arts by Betram C. Bruce also show up some advantages like new technologies can help to realize more functional ways of teaching and instant feedbacks from the application as same as there are some drawbacks like High cost to build a software related to the topic and student teacher relationship might get lower due to the tech intercession [2].

“An effective application of natural language processing in second language instruction” by Noriko Nagata and “Spell-checking on the fly? It is a Japanese grammar correction system which was created as a computer based application. Since it is not a mobile platform based application it is much hard to use in a portable device. So that it will cause child to isolate with the computer and also it is only for Japanese language [3].

On the use of a Swedish dictionary app” by Louise Holmer et al. It is also a Swedish spellings checking application. Now in this case it has both computer and mobile platforms so that kid can play the game on a portable device. This application also have search functions to find words as we need and we can listen to the audio pronouations of words as an extra feature [4].

Glen Stockwell, “A review of technology choice for teaching language skills and areas in the call literature”, also computer based learning related software which shows some advantages and drawbacks on the research area [5].

British council Sri Lanka which is a well known English teaching Academy also have invented English teaching applications which helps kids and adults to learn English while listning as well. They are not intended on doing a such application to buildup kids group working skills [6].

3. Methodology

Developing team is being developed the application using prototype methodology of Software Development Life Cycle (SLDC). An array of prototypes leading to the final design.

3.1 Planning

Issues that team had to face mainly were time management, financial problems, Database issues and Interface integration issues. For time management purposes team created work break down structures and grant charts. Prototype module was used for developing the product so that it will be easy to change the functions when it’s necessary.

3.2 Requirement Gathering and Analysis

Since the application is an English learning tool (application) for specially designing for those who learns with the modern technologies. This application was specially designed for kids and younger generation kids. Having a good knowledge of English language is a most important thing to when implementing at this kind of application. Requirements of this kind of project teachers who are doing English elocution classes and those who are conducting IELTS as their profession. Developers had to follow those well experienced people and learn what are the modern technics used in English language when a student have to learn in their first step and also the information was gathered from the literature reviews tha more helpful to the developing team to gather more information about the project how it is going to be design up with a better final result of the project.

3.3 Design

It will be helpful to design the application phase by phase. Interface designing, database designing, coding will be the some parts of the application phases. According to the prototype modal each parts will be design and verify with the project supervisor. While the application is developing designing feed backs will helpful to develop the application for the final design.

3.4 Implementation

Since the system is a mobile based application it will design by using android. Android is open source software that can develop many applications with developer’s preferences and many mobile devices and also tablets devices design with android operating system. So that Java was the main language that was used on developing the
application. Other than that developers used MySQL for databases and Java Script and HTML for some interface designing.

3.5 Testing

Internal logic of the application’s code, paths, conditions, statements test will based in the white box testing and the outside of the application such as functionality and the requirements of the application will based on the black box testing. Both testing will do to identify the defects of the application. Other than those two testing methods developers also needed to run following tests to verify application’s 100% accuracy such as Unit testing, component testing, Integration testing and User testing.

4. Results and Evidence

Main screen in Figure 2. After user launch the Alpha Champ game user direct to the following main screen to get simple idea about the game before begin. After clicking the next button it will direct to a new interface.

After the Figure 2 next button is pressed application will be direct to the screen where showed in figure 3. Players can go for a new game, see the credits and settings or else exit the game.

Pressing new game is the starting of the new game and players have to give their names one by one in order to find out there role on the game play as Figure 4.

After the player’s names were entered Figure 5 will be the screen showing the level one starting screen.

Figure 6 is shown the level 1 game play where all four players have to find out the clues for the puzzle given and solve the entire puzzle to reach the level 2.
After the completion of the level 1 player direct to the Figure 7 screen for the next level introduction such as how to play the game and how the score are given on the successful turn and the fail.

As shown if Figure 8 level 2 is where all four players have to scribble words to the given letter. After that level is ended game will direct to the level 3 game play.

Figure 9 is shown where four players have to create the word for the given image. If it is a four letter word four players have to select each word to complete the word. After few picture were given level will be over and final results will be shown in another screen.

4.1 Discussion

While developing the application developing team had to face a problem of integrating the each function to the system. One part was developed using JQuery and team had to use Ionic framework to integrate it to the android application. Developer team’s original plan was to develop a Wi-Fi based system but developer’s team thought that building such system will break the team working skill of the kids. So that developers had to deviate from the original plan and implemented the function in one application.

5. Conclusion

5.1 Recommendation

Developers must have at least a pc that runs in a Core i5 processor and 8GB of minimum Ram to run the android virtual machine without getting stuck while debugging. Some of the graphical problems have to go through professional graphic developers to give the users a reliable and effective game play.

5.2 Future work

Adding more game levels to the application is the main future work we have to do. Developing the application to support multiple platforms will be another advantage to the kids that who are using the system. Also selling the product to several schools will be a main target as well. There will be a development going on to teach languages other than English. Such as Tamil, French etc… Since the application is currently built for the kids, developers are planning to build the application for a manner that elderly people can use to learn language.

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REFERENCES


