ABOUT THE CLIENT

Jim Enterprises is an organization based in California that has been providing intervention services to thousands of students in school districts since 2006. Later, it started providing the parent programs for English language development and learning. Known for its consistent academic success & proven expertise in offering high quality educational managed services, many school districts, private agencies as well as County offices of Education started working in collaboration with Jim Enterprises.

To enhance instructional services in English language development, and English language Arts for both the parents & students, the client came up with the idea to build a web app & Android Tablet App to empower them & excel in their education. As proposed, the development team of Clavax has successfully built the new platform of Jump into English for Parents & students whose functionality was replicated like the existing program of Jump into Maths for Students.

GOALS OF THE PROJECT

As English is the most commonly spoken language all over the world, it has become necessary to consider it as our second language apart from the native language. California has more Spanish speakers than English, which is why Jim Enterprises came up with an initiative to educate students and parents with basic English so that they can speak or at least understand English. In addition to English, the intervention service is also available for Maths to prepare under-performing students with the knowledge of common core mathematical standards.

The Jump into English(JIE) and Jump into Math(JIM) programs for students mainly focus on English language development, English language Arts and Mathematics. While Jump into English program for parents includes language development, parent engagement as well as empowerment curriculum. The main motive behind the development of JIE App is to provide education to those students & parents who are keen to learn English through different learning activities provided with the programs.
One of the most challenging tasks is to build a platform for the people of California especially the parents who have little or no technical knowledge of how to use the learning app to study English. Like every other project that has been handled by Clavax, all the challenges were successfully addressed after thoroughly understanding the client's requirements. Some of the crucial issues faced during the development stage of JIE are:

- Though smartphones and advanced technology have reshaped the way we learn or perform our daily tasks, it is still a challenge for some people in California that has no technical knowledge of how to use a tablet or computer. Building a learning platform for them was an arduous task as the user interface that needs to be developed should be very simple & clear with basic features to make them understand.

- There are still lots of people in California that does not know how to speak English and developing an app for them considering their mentality was not an easy task. The interface and the design of JIE app have been built in such a way that it is easily accessible by them on tablet or web. Moreover, building a common learning app for both students and parents was a challenge as there is a huge age gap between them.

- Making the transition from the existing desktop version of Jump into English into a new app was difficult as the developers were not familiar with the old tools and the technology it uses. They had to thoroughly study the code from the existing system that used legacy software to replicate the code with the same functionality for developing the new web & mobile app.
SOLUTIONS

After having a series of interactive discussions with the client, many solutions were implemented for the successful development of the app. Some of the solutions are:

- The project interface was designed in such a way that students and parents can easily open the app, register themselves and start learning English. The project is divided into three phases as level1, level2 and level3, where each level is again subdivided into 4 different activities related to letters, sounds, vocabulary, listening, speaking and games. The next level can be accessed only after completing the activities of the current level.

- To ensure that the learning activities of the JIE app help in improving the students and parents, the system has been developed with the voice recording feature so that users can record their voice & compare their pronunciation with the correct one. Also, there is a pre-and post-assessment online test to compare how much they have learned after completing the activity.

- Both the frontend and the backend of the JIE app supports two languages i.e. Spanish and English so that users of the app can go back to Spanish interface when they have any difficulties in understanding the activities written in English. In addition to that, the ‘How-to’ instructions of the app will display written text in English, with US/Mexico flags to play the introduction audio in English/Spanish.

TECHNOLOGIES USED

The tools & technologies that were used by the team of Clavax for the development of this project are as follows:

**Web App**

- APIs : PHP/Python
- Scripting Languages : PHP, HTML5, DHTML, Jquery, Javascript, React.js
- Platform Environment : Linux
- Database : MySql/PostgreSQL
- Web Server Support : Apache Latest Version
- Project Management : JIRA
- Version Control : Bitbucket/Gitlab

**Tablet App**

- Language : Core Java
- Platform Environment : Android Studio
RESULTS

With the motive to make the Spanish students & their parents learn English with ease, a custom-tailored tablet application has been developed by the team of Clavax as per the client's requirements. The system has been built considering that many users will be in beginner's stage without basic knowledge on how to operate the tablet. To enable a great user experience, the JIE app has been divided into multiple levels for beginning, early intermediate and intermediate levels with multiple activities in each level. The online platform of Jump into English for students & parents has successfully provided an opportunity for Spanish speaking users in need of language support using technology with a tablet app. With this app, not only students are being trained but also the parents to increase parent involvement and engagement within the school community of the students.