K-Pop Live: Social Networking & Language Learning Platform

Thomas Chua
ztchua.2010@sis.smu.edu.sg

Chin Leng Ong
cl.ong.2010@sis.smu.edu.sg

Kian Ming Png
km.png.2010@sis.smu.edu.sg

Aloysius Lau
pohchye.lau.2010@sis.smu.edu.sg

Houston Toh
houston.toh.2010@sis.smu.edu.sg

Feida Zhu
fdzhu@smu.edu.sg

Kyong Jin Shim
kjshim@smu.edu.sg

Ee-Peng Lim
eplim@smu.edu.sg

Singapore Management University

Abstract

K-Pop live is a social networking and language learning platform developed by an undergraduate student team from Singapore Management University. K-Pop live aims to combine social media together with gamification to promote Korean culture. It consolidates all relevant Tweets from Twitter as well as videos from YouTube. The platform allows the user to connect with his friends who share similar interests in terms of K-pop artists and music.

Keywords: social network, K-pop, language learning, gamification

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Introduction

K-pop live is a branch of PalanteeRT (http://research.larc.smu.edu.sg/palanteert) developed by Living Analytics Research Centre (LARC) at Singapore Management University. It is a live real-time application based on a state-of-the-art data mining technology that collects relevant and trending data from major social media sources such as Twitter and YouTube. Our objective is to develop a system to transform LARC's research into a feasible consumer application. K-Pop live is an interactive iPad application where users can easiy tap into their favorite K-Pop artists and connect with friends who share similar interests. The platform updates the users by continuous analysis of their surfing behaviors and interests. Through the platform, users can acquire the latest K-Pop news and media through a consolidated newsfeed. It alos allows users to share contents with their friends through integrated Twitter and YouTube features. The platform is equipped with gamification features designed for language learning the fun way. It recommends K-Pop songs to users based on their interests and prompts them to participate in "Learn Language" game. Each song is rated differently based on the level of difficulty (community rating). Successfully completing a song is similar to completing a quest in games. Users acquire points and get recognized for their achievements.

K-Pop Live's Features

In the following section, we describe features of K-Pop live. The last decade seen an explosive growth of online social networks. Of the widely popular social networking platforms is Twitter. If you are like Houston, who has interests in many things, soon you will find it difficult to sort out and organize tweets by your specific interest topics or categories. Houston, an undergraduate student, is seeking to network with those that share similar interests in music. K-Pop (Korean popular music) has gained significance fan following all over the world along with K-Drama (Korean drama and movies). Houston is

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planning on doing a semester of exchange in Korea and he is seeking a fun, interactive way to learn more about Korean culture and language.

Profile Management

In My Profile page, users can edit their profile details. Users can scroll through all K-pop artists and select K-pop artists of their interests. The platform will continuously monitor online popular K-pop artists and make this list updated. The platform will record these selections and in the background, it will sort out and organize tweets and YouTube videos based on these selections. Users can go back and add or remove K-pop artists of their choice from their "Favorites" list.
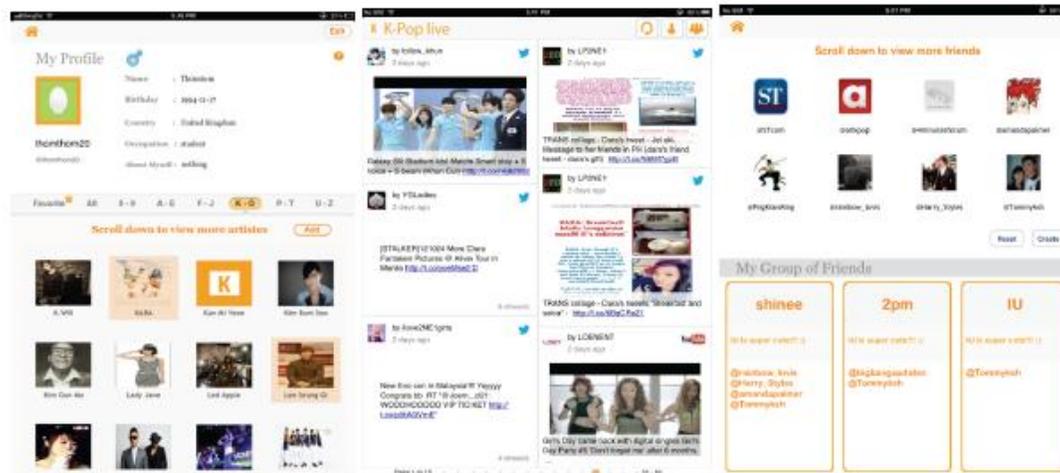

Figure 1

Custom Newsfeed

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Profile Management

K-Pop live displays up to six news items (tweets or YouTube videos) in each page. Users can flip through the pages on the screen. Click on each news item will expand that particular item and show the entire content. Users can re-tweet or tweet right from the screen. If it is a video, users can directly play the video from the screen. If it is a website, users can directly view the website without leaving the K-Pop live platform.

Forming Interest Groups

Of the many users you follow and many users that follow you in Twitter, how do you know to tune into whom for which kinds of news? Likewise, of the many users in YouTube whose videos or channels you follow, how do you know to tune into whom? K-Pop live makes it easy to form interest groups. This way, you can further refine tweets and YouTube videos based on shared interests. Additionally, this allows you to easy share your tweets or YouTube videos with only those that are interested in the K-Pop artists or music features in the media. Users can easily create, remove, or edit interest groups in K-Pop live.

Language Learning Game – Overview

Viewing, re-tweeting, and sharing your favorite K-pop news and videos is cool. K-Pop live monitors users' browsing behaviors and uses it to recommend K-Pop songs for language learning. Each song is rated by the community based on its difficulty. We selected top K-Pop songs viewed and played from K-Pop live and a panel of Korean speakers reviewed and assigned initial difficulty rating. This panel of Korean speakers also contributed translations as well as English phonetics, which will be used in our game. We plan on bringing more crowd sourcing into this process going forward, while maintaining a panel of Korean speakers from the community to mediate.

Language Learning Game – Game Mechanics

Users start out as Level 0 (not having played this game). They will be prompted to participate in language learning game. They can choose to ignore this and turn off this feature permanently, if they choose to. Based on the K-Pop artists from their Favorites list and their browsing behaviors, they will be given a list of songs to choose from. If this is the first time a user is playing this game, all songs will be at Level 1. Users can choose a song and "unlock" it by successfully singing along.
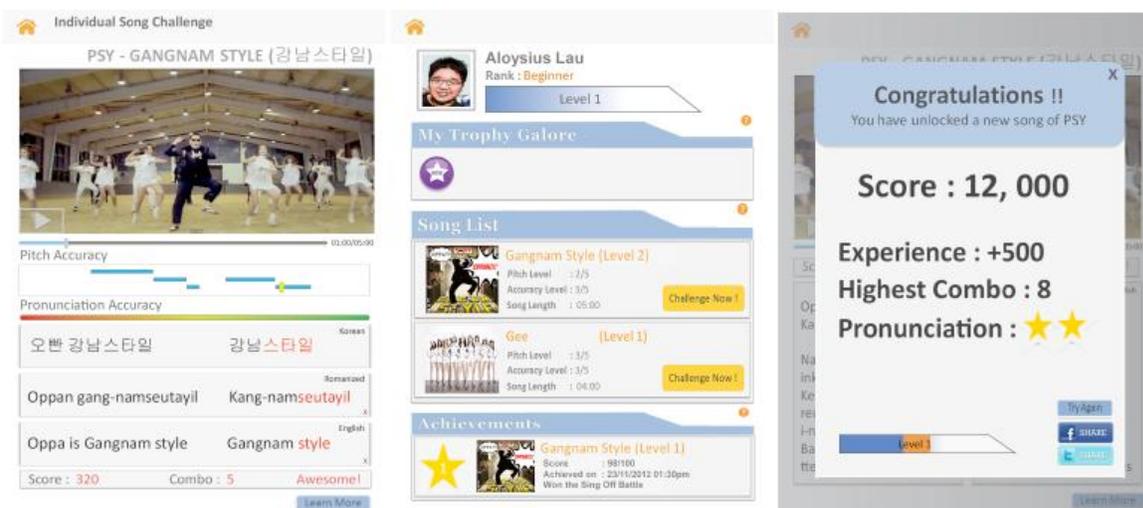

Figure 2

The platform will measure two aspects of singing. First, it will perform pitch detection. Second, it will perform pronunciation detection. Each song is divided into multiple verses. Scoring will be done for each verse and the composite score is the average across all the verses. For users to successfully pass the song, they must score beyond a set ratio (for now, it is set to 50%). Upon successful completion, users will acquire XP (experience points). All songs at a particular level are assigned a set XP. Supposing that Gangnam Style (by Psy) is assigned 100 XP. Houston scores 100% on pitch and 50% on pronunciation. The resulting mark will be (50XP * 1.0) + (50XP * 0.5) = 75 XP.

Once users reach a certain XP mark, they will level up. As of now, with K-Pop live platform, each level is assigned a fixed XP. From Level 1 to Level 2, it takes 500 XP. From Level 2 to Level 3, it takes 1500 XP and so on. It is designed in such a way that it is increasingly more demanding to level up. However, more "difficult" songs come with higher XP.

Language Learning Game – Social Sharing & Social Playing

Users can play and practice each song as many times as they want. When they are ready, they can click on "Challenge" and their singing will be recorded. Pitch and pronunciation detection will then be done and the final marks will be released on the screen. Users can then publish this result to Facebook, tweet it in Twitter and share with the world.

K-Pop live connects users to other users through singing battles. It matches up two players based on shared interests in K-Pop artists and music. As of now, we match up two people if they share similar K-Pop artists and music as well as same game level. There are two ways to participate in this singing battle.

Users can choose to participate by clicking on "Challenge Me!". K-Pop live will then go and look for active users online and prompt them to participate. Or, users can turn on "Other users may challenge me" option and be online. Then, K-Pop live will connect the users to others opting for "Challenge Me!" option. Users must accept the challenge within three minutes, otherwise the offer expires. Participating in singing battles will lead to gaining of bonus and "XP boost".

Upon two users accepting the challenge, singing battle will begin. K-Pop live will perform pitch and pronunciation detection in much the same way it would for individual singing challenge. It will then compare the score and display the winner/loser on the screen. The winning player will gain both bonus and XP boost. The losing player will gain bonus but not XP boost. They can choose to publish the singing battle result to their favorite social networking platforms. They also acquire "Social Badge" by participating in singing battles.

Whenever there is a new song released in the game, K-Pop live will add "XP boost" option to it and advertise. We envision running different kinds of campaigns to get more users to participate and get their friends to come and participate (that may not necessarily be already playing our language learning game).

Language Learning Game – Language and Culture Learning

K-Pop live features Korean Alphabet & Vocabulary feature. Users can click on words in song lyrics and K-Pop live will display a pop-up window showing the chosen word in Korean (Figure 3). It shows the breakdown of the word in terms of consonants and vowels. It shows how the pronunciation is determined.

Singing along and challenging friends can be fun. Upon completing each song, users are prompted to participate in a Quiz. It is a phrase matching game where users will be prompted to match Korean-written verses to English Phonetics to English translations. Five verses from each song will be given and each correct mapping will result in a bonus.

Additionally, music is a powerful way to connect cultures. Clicking on phrases or words in song lyrics will pop up Information window, which will show news or Wikipedia entries related to the selected phrases or words. Right from K-Pop live platform, users can look up all information related to the song, song artist, or any keywords or news relevant to the song.

Figure 3

Conclusion

K-Pop live aims to be a one stop portal for all things related to K-Pop. With its various social networking features geared towards customized newsfeed and news sharing, users can now easily access real-time news about K-Pop catered towards their specific interests. Using this user preference and browsing information as well as social information (e.g. who shares similar interests with who), K-Pop live makes language learning fun and relevant. Through gamification, users can learn Korean language the fun way and learn it together with friends who share similar interests as them.