
“iMAJN”: social games enhance ESL students usage of idioms/jargon/slang

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Abstract

Most international students in the U.S. are English as a Second Language (ESL) students, and can face difficulties in communicating with native students. Researchers attribute these difficulties to (1) lack of language proficiency, and (2) culture shock. Although they may have sufficient knowledge of formal vocabulary, our research indicates knowledge of informal language as a challenge to both language proficiency and cultural assimilation. Therefore we propose “iMAJN,” an application to augment the learning of idioms, slang, and jargon through an array of games to improve communication and enrich social identity among peers. The first of these games, “Idiomatica,” teaches the meaning and proper use of idioms that might be used in conversation with a native speaker. Another game applies the traditional format of “Pictionary” to the learning of informal language through video chats with native speakers. The third iMAJN game, “Just A Minute,” is a social game that users play in groups to break cultural barriers through intense communication challenges with a 60-second time limit. iMAJN aims to increase ESL students’ familiarity and confidence with informal language as a pathway to deepening their multi-cultural experience and enriching their interactions with native English speakers.

Author Keywords

ESL; idoms; slang; jargon; games; culture shock;

ACM Classification Keywords

D.3 Programming Languages, D.3.2 Language Classifications, D.3.3 Language Constructs and Features, D.3.4 Processors

Introduction

Each year nearly one million international students attend university in the United States, and most of them are ESL students. Many international students choose to socialize primarily with others from their home culture, which can diminish their assimilation into American culture and inhibit interactions with others. We begin by asking what keeps ESL students from communicating well with native speaking (NS) students.

Yang (2007) finds that there are three dimensions of difficulties faced by ESL students: (1) lack of language proficiency, (2) a deficiency in cultural awareness and (3) academic achievements. Yang [deleted redundant year] illustrates that ESL students have problems with language and culture shock regardless of high TOEFL and GRE scores. Yang [deleted redundant year] also states that Chinese students, in particular, face problems with listening, resulting from the differences in discourse patterns between the two languages.

Over 375 million people worldwide are learning English as a second language to help make friends, get jobs, and enjoy new experiences. However, becoming a proficient English speaker for them is a process fraught with competing pedagogies. One school of thought argues that "vocabulary should be placed at the center of language teaching" because "language consists not of traditional grammar and vocabulary, but often of

multi-word prefabricated chunks." [1] These chunks include idioms, slang, jargon, and other "semi-fixed expressions" - also called formulaic language. TA Andriani asserts "formulaic language... is the key to fluency and [it] motivates the learner." [2] Nattinger and De Carrico (1992) consider idioms to be the most important subcategory of formulaic language. It follows, then, that achieving fluency in English is heavily dependent on the ability to use formulaic language appropriately. The benefits of mastering formulaic language are numerous. Idioms, slang, and jargon are standard phrases and words with commonly agreed meanings. Much formulaic language is unique to anglophone regions or lines of work (i.e. American slang or technology jargon). This idiosyncrasy means that ESL students must learn certain phrases that are unique to their country of study. However, most English textbooks do not teach idioms, jargon, or slang.

Teaching methods in general (ESL included) have been enhanced by the introduction of the Internet to the classroom. As Yuan (2003) finds, the usage of Internet chat rooms for the purpose of teaching ESL has proved effective. "The Use of Chat Rooms in an ESL Setting" by Yuan (2003), explores the combination of an online chat room with a traditional classroom to improve ESL development. Yuan states, "The opportunity to practice their English in the chat room helped refine their English. They noticed errors they made in their chats and offered corrections or sought solutions, resulting in more target-like language production" (Yuan, 2003). As KASAPOĞLU-AKYOL (2010) also mentioned: "studies show that a supplementary on-line learning environment may enhance language learning and development." [3]

Our solution uses a mobile app to teach ESL students idioms, jargon, and slang. It expands upon similar past

Table 1: Competitive Analysis

Alternative	Pros	Cons
Mind-snacks	1. Most games are fun 2. Helps users associate words with images, synonyms, and antonyms	1. Little context for use, encourages memorization 2. Unappealing content: only SAT/GRE words and cannot play by theme 3. Closed platform: users cannot add content 4. Individual play: users cannot play with others 5. Only tests words, not idioms or phrases.
Elevate	1. Most games are fun 2. Comprehensive: develops writing, listening, and reading skills	1. Closed platform: users cannot add content 2. Individual play: users cannot play with others 3. No ability to favorite words & questions
QuizUp	1. Social users can play with others 2. Themes: users can play a specific topic 3. Diverse content: users can play by slang, pop culture, jargon, etc. 4. Open platform: users can add & edit content	1. Little context for use, encourages memorization 2. No ability to favorite words & questions
Duolingo	1. Comprehensive: develops writing, listening, and reading skills 2. Helps translate third-party content	1. Closed platform: users cannot add content 2. Individual play: users cannot play with others 3. No ability to favorite words

Table 1. Competitive Analysis.

solutions, specifically within the CHI community. For example, Xpress [4] was a proposal for a Q&A mobile application that helps ESL students learn colloquialisms by providing them with crowdsourced answers to specific questions. Chen and Tsai (2009) present a game-based language learning mobile app that helps ESL students learn based on their location. [5]

We conducted competitive analysis of existing language learning apps (see Table 1) and observed a gap between them and informal language learning apps. In this paper, we identify the use of informal language (slang, idioms, jargon) as a problem space that most of our research subjects struggled with and for which there is a dearth of effective supporting pedagogies. We present “iMAJN”, a mobile application to increase ESL students’ confidence in using informal language and improve social communication between native and non-native English speakers.

Formative Research

We began our research by considering the solution of Augmented Reality (AR) in instant translation for ESL students, and employed contextual inquiries to identify a real problem. We then realized the problem was not limited to vocabulary, but included culture shock, language proficiency, and opportunities for expression. To address the problem and improve expression, ESL students need more social activities that afford the understanding of idioms, jargon, and slang.

Two surveys were conducted to understand the primary issues faced by ESL students. The first survey found out that even with high standardized test scores, ESL students face comprehension problems and are searching for ways to improve their expression and

vocabulary. The second survey provided us with more specific insights. ESL students had problems deciphering local jargon, pronunciation, and understanding their native-speaking counterparts. We also interviewed some of the survey takers, and learned that ESL students feel a lack of confidence when they struggle to speak with native speakers. Subjects felt that this lack of confidence adversely affected their communication with their native-speaking counterparts. From the survey, we gleaned two major insights:

(1) Social demands. Although some ESL students have less severe problems understanding idioms, slang, and jargon during conversation, they still need support for their own use of informal language in social situations. For example, ESL students would benefit from games they could play with native speakers.

(2) Agile study. Although information sources like dictionaries and Google Translate could be accessed on a student’s smartphone, to do so in the midst of a conversation is disruptive, inefficient, and may even be considered disrespectful. Because of this, we take the position that ESL students are disconnected from technology during conversations that might otherwise provide valuable learning experiences. For this reason, ESL students need an agile solution for both learning and incorporating informal language into such conversations.

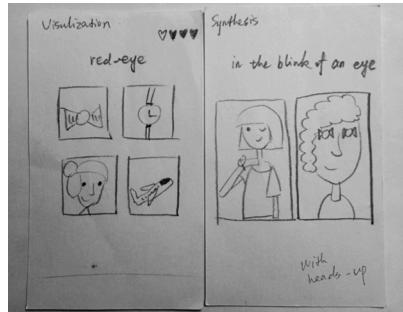


Figure 1 Paper Prototype of "Idiomatica"



Figure 2 Paper Prototype of "Just a minute"

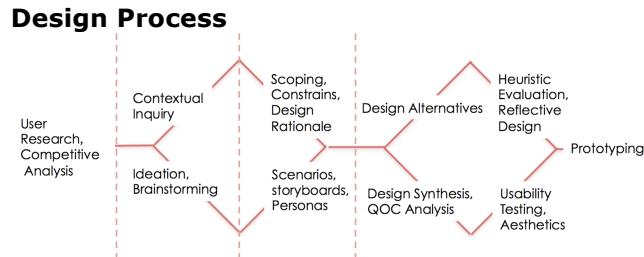


Figure 5 Design Process

Keeping these principles in mind, we conducted user research and competitive analysis, based on our surveys, we proposed some solutions through brainstorming and ideation, which are shown in Figure 1 and Figure 2. Then we conducted design critics to narrow down proposed solutions. But what about other alternatives of our questions have not yet been explored? Therefore we conducted user tests of our paper prototypes, and narrow down our 11 solutions (Figure 6) and iWatch solution to 3 games.



Figure 6 Primary 11 solutions

Proposed Solution

Our solution is an open-source educational mobile gaming app that helps ESL students living in the U.S. learn and use idioms, jargon, and slang. We empower ESL students to experience "micro culture shocks" in three games that incorporate formative learning, social demands, and agile study.

"Idiomatica" is a theme-based game that helps ESL students with initial learning of idioms, jargon, and slang. At the beginning ESL students can choose between different themes, such as "environments," "emotions," etc. As mentioned by Osman (2009), theme-based instructions to help ESL students study better.

The game offers multiple choice answers to test the user's understanding of terms and phrases. In order to motivate play, Idiomatica gives visible feedback about the user's choices to build a sense of control and overall positive experience with the app. Flashcard methods are used toward the end of the game to strengthen memory of the terms and phrases.

Once students feel comfortable with their understanding of the informal language in "Idiomatica," they progress to the "Pictionary" game, where real-world environments are simulated to build their confidence in listening and speaking with native speakers. "Pictionary" is a live chat room game that matches ESL students with native speakers. According to the generation effect, studies have shown that when students generate their own answers to a problem, their mastery of a topic is greater than when an instructor shows them how to solve a problem [6]. From our research, many ESL students have native speakers as friends on Facebook. Our approach then, is for the app to use existing Facebook, Twitter, and Google accounts so students may invite their native

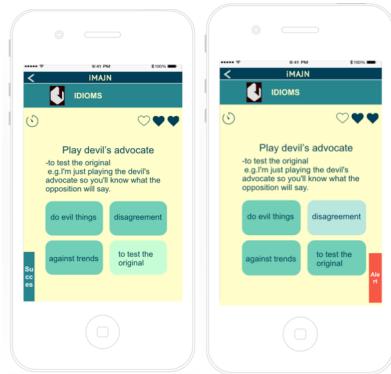


Figure 4 "Idiomatica" Interface

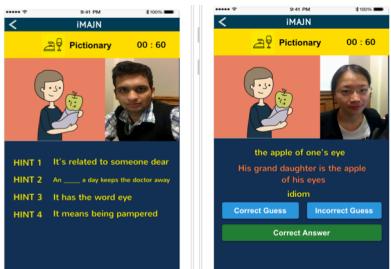


Figure 3 "Pictionary" Interfaces

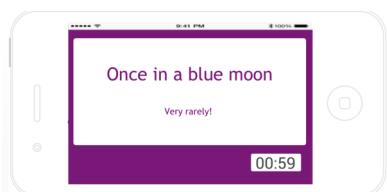


Figure 7 "Just a Minute" Interface

speaking friends to practice with them. Native speakers can see the idiom, jargon, or slang term in question, and can offer instruction and support to the ESL learner through video. ESL students can also click hints on the screen that aid their learning. Once they get the right answer, the native speaker will verify it is correct by clicking "Correct Answer." This offers students a way to master informal language through the generation effect.

Finally, in order to solve culture bias in understanding English, iMAJN may also be played in groups. "Just a Minute" addresses the ESL students' need for social interaction to apply what they have learned. In this game ESL students place their mobile device on their forehead, screen facing out, and native speakers explain the meaning of the idiom, jargon, or slang term displayed on screen, while the ESL student attempts to get as many correct answers as possible in one minute. This intense communication and entertainment teases out cultural bias when ESL students cannot understand a native student's explanation or if a native student cannot understand an ESL student's pronunciation.

Incentive Design

App users tend to show intensive use of an app when they first download it, but then gradually lose interest in the app. We attempt to design incentives in order to motivate users to continue using the app after their initial download. Based on self-motivation theory, "the satisfaction of certain psychological needs can increase engagement and playtime in mobile games" [7]. This theory applies to native speakers who participate in the games. We believe they will feel a sense of control and ownership with achievements in the game. Sharing game levels on social media will give them a sense of

achievement and a medium in which to show their benevolence and volunteerism.

For ESL students, we include a nudge for them to download the app. ESL students that do not regularly engage in conversation with native speakers will seldom understand the importance of informal language. The option to find the app through "voice search" would be included. For example, smartphone users can use "OK Google" or "Siri" to inquire about language apps. After ESL students download the app, "iMAJN" will ask if it may send one idiom, one slang, and one jargon per day through Notifications, to engage them in consistent learning of informal language.

Evaluation

Our project "builds meaningful new creations and possibilities" by facilitating social interaction between ESL students and native speakers, so that there will be more social support and information support built among them. Our games are meant to be played between ESL students from around the world, thus "enabling people from different cultures to be connected and to be heard and appreciated."

In accordance with the design principles of visibility, mapping, and feedback by Norman (2002), the app "iMAJN" uses animation and different colors to make different games visible. Based on our usability tests, the "iMAJN" app matched users' mental model. For example, in "Idiomatica" users know where to click to move to the next step, and how to go back to the menu. We designed visual feedback for when users get the right answer, and an encouragement page when they get wrong answer to minimize frustration.

Conclusion



Figure 5 Team

ESL students are a growing subculture in the U.S. They meet with diverse challenges when they leave their home cultures to pursue an education in the U.S. Our "iMAJN" app empowers them overcome culture shock in communication with native speakers through three steps of enhancing the learning of idioms, slang, and jargon.

Acknowledgements

We thank Prof. Tawanna Dillahunt, Prof. Barry Fishman, and Prof. Eric Cook, as well as our survey participants.

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