



Elexis King

Video Link: <https://vimeo.com/420942085>



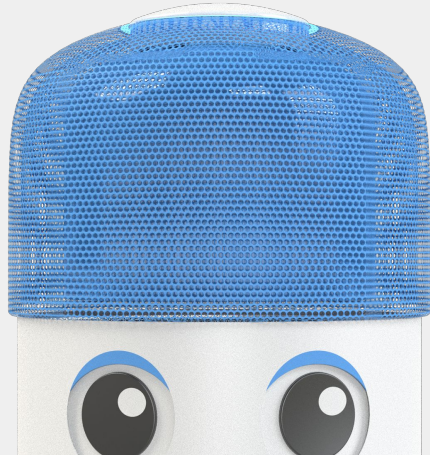
# uki·uki, うきうき

“ooh-kee ooh-kee”

Japanese onomatopoeia

1. happy, cheerfully lighthearted, and full of hope
2. excited because of joy or hope, cheerful
3. monkey sounds, “Ooh ooh aah aah”

# Contents



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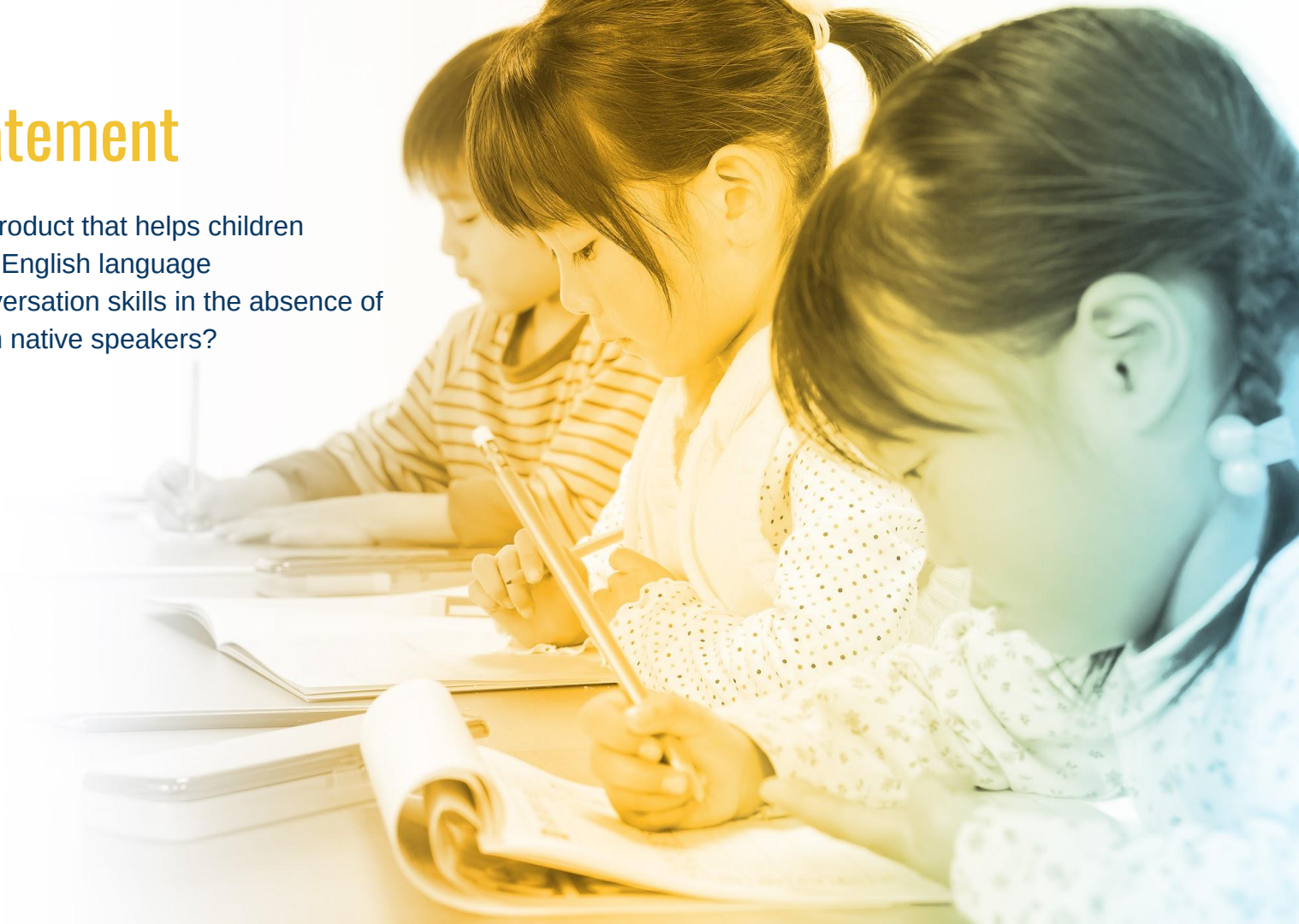
Mobile Application



# THE PROBLEM

# Problem Statement

How can we develop a product that helps children understand and practice English language communication and conversation skills in the absence of opportunity to speak with native speakers?





**RESEARCH**

# Current Market Examples



Anpanman (character) book set with talking touch pen for listening practice



Flashcard letter blocks spelling practice



ECC Textbooks with talking touch pen. Allows user to record voice as well to try to match the recording.

# Current Examples Continued: Pros and Cons of Learning Products



## Pros

- Fun and easy to use
- Engaging
- Pronunciation and listening practice

- Reading practice
- Fun and easy to use
- Spelling practice

- Reading and writing practice
- Spelling practice
- Listening practice
- A little speaking practice
- Touch pen is engaging and fun

## Cons

- Set vocabulary, no update available because it is printed
- No practical application
- No conversational practice

- Repetitive
- Difficult to diversify activity, so not engaging overtime
- No speaking practice
- No listening practice

- Set vocabulary because printed material
- No practical speaking application
- Does not cater to different learning styles because it is written material



# Design Direction: Talking Toys



There are already toys that can sing and talk with each other. Having toys that can follow certain conversation cues using the touch feature would help children recognize speech patterns and teach other valuable lessons as well.

# The Facts



of all public school students  
are **ENGLISH LEARNERS**

<http://www.facethefactsusa.org/facts/limit-ed-english-students-test-public-schools/>

## EF English Proficiency Rating in Japan



<https://www.nippon.com/en/japan-data/h00594/japan%E2%80%99s-english-proficiency-drops-among-non-english-speaking-countries.html>

## 2019 English Proficiency Ranking in Asia

- 5. Singapore
- 20. Philippines
- 26. Malaysia
- 33. Hong Kong
- 34. India
- 37. South Korea
- 38. Taiwan
- 40. China
- 41. Macau
- 53. Vietnam
- 54. Japan

<https://www.nippon.com/>

# What is wrong with English education in Japan?

“Many students start studying English in junior high school with eager anticipation. Unfortunately, due to the **emphasis on memorization and learning about English**, rather than using English for the purpose of communication, many lose interest.”

- “English language education in China, Japan, and Singapore”

“Usually, the poor achievement is blamed on the way English is taught in schools. It is said that there is **too much classroom emphasis on grammar with very little time devoted to actual conversational practice**. The emphasis is mainly on the silent skills of reading and writing. Listening is rather passive as opposed to being an active part of a conversation. The focus is on accuracy and avoiding grammatical mistakes. Students spend a great deal of time copying out what was written on the blackboard and memorizing it in preparation for tests. They often **describe English lessons as boring**.”

- The Japan Times, “Why do Japanese have trouble learning English?”

# Current rules for language study in Japan

- Students **ages ten and above are required to study English**. This rule was introduced in 2011.
- Beginning in the upcoming 2020 school year, mandatory English language education will be expanded to include third and fourth grade students.

# What is Singapore doing differently?

- Singapore has had a Bilingual Policy since 1966 and requires that everyone speaks two of the nation's four official languages: English, Chinese (Mandarin), Malay, and Tamil.
- Students study English for the sake of **conducting business on an international level**

# What can we do?

- We can not change the government policies, but focusing on at-home/out of school study time will help cover the areas of English language study that children miss at school.
- Focus on grammar is taken care of in Japanese schools, **focus on speaking practice and pronunciation** is our goal.



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# **INTERVIEWS AND OBSERVATIONS**

# My Teaching Observations

One-hour lesson, six students, ages 6-8 years old

- During flash card chorusing, one student was distracted during the second round. He started playing with his socks
- During reading time, one student was playing with her keychain instead of reading along
- Five students were actively engaged during games like ball toss with vocabulary review, friendly competition, two teams
- Three of the students were engaged and interested the entire time using flash cards
- Flash card memory matching game was interesting for four of the students. Two were not interested
- One student was not interested in games that involved team play, but enjoys class work time and the chance to show off how quickly he could finish writing his letters (different chance at competition)
- I required students to memorize and pair practice a comic. Three students enjoyed. One student had a hard time memorizing. Two of the other students were distracted and playing, but were able to perform well with the memorized structures.





# Stefanie, USA, English Teacher in Japan, 9 years



1. For children, I think it's the sheer amount of vocabulary they have to study.
2. Probably maintaining interest for the duration of the class
3. Making the lessons more relevant to children (thinking of the C level classes in particular, but this is also true for A and B levels)
4. Yes, I studied Spanish and the vocabulary was tough, as was having to worry about grammatical gender
5. Hands-on activities help the most, things that are immediately relevant with tangible results. Example: Even though I hate them, the arts and crafts lessons with instructions.
6. Consistent practice at home, because even if you go to international school studying English every day you still need that reinforcement
7. Picture dictionaries with sound, especially for very young learners? Video games/apps? Music? Movies that can also be found in their L1? Any of these could help them out.

**"Games or competitions where they are having to use their English to win are great."**

# Chris, UK, English Teacher in Japan, 7 years



1. I think probably learning to write and spellings. Even if you ignore words with the same sound like "their", "there" and "they're", there are sounds in English which don't always exist in other languages. L/r, b/v and s/Shi are common examples of hard sounds for Japanese people.
2. I think the most difficult thing about teaching kids is the different levels of motivation you can have among students. In the same class you can have a kid who wants to know the English word for every thing on every poster and a kid who has no interest in doing more than the absolute bare minimum.
3. More family involvement would help with children. If the parents help them practice or speak some English with them a few times a week it makes a huge difference. In our classes the kids whose parents are going through the vocab with them everyday are far more confident. In Japanese schools there is very little focus on speaking still so having the kids speak a bit every day instead of just memorising grammar is important.
4. I studied French from 11-16. The most difficult part I can remember was trying to memorise the verb conjugations and masculine/feminine words.
5. Games or competitions where they are having to use their English to win are great. Most kids get excited for the competition and will really try to speak up, just need to make sure speaking is an integral part of the game.
6. Practise! Unfortunately a lot of students and parents tend to think of English class as a once a week and done kind of thing but it's hard to learn if you only do it once a week for an hour and then don't think about it for 7 days.
7. I guess it depends on the age group but I've seen a few robots advertised that teach English lately, I think I would have been interested in those as a kid!

**"It's hard to learn if you only do it once a week for an hour and then don't think about it for seven days."**

# Reiko, English School Staff Member

1. They have never spoken English before. If they have always lived a typical life in Japan, they'll have never had a chance to speak English.
2. Games and songs.
3. University and College admissions.
4. As for students who do not go to Eikaiwa, typical school education that begins in Junior High School. Well, now that is beginning in elementary school.
5. I went to an Eikaiwa school. It was fun.
6. Studying English was not so fun for me in school. However, when I learned something I realized I could use during travel, that was fun! For example, at a hotel check-in. When I realized, "Wow, I could really use this" I thought, "I'll definitely try this next time I go on a trip!" Still, regular studies like grammar were not fun at all.
7. Japanese children and foreign children don't have a chance to interact with each other, so it would be fun if they could have a chance to play with each other.

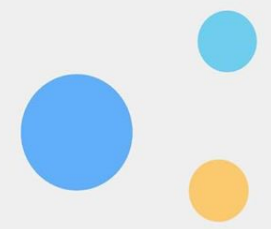
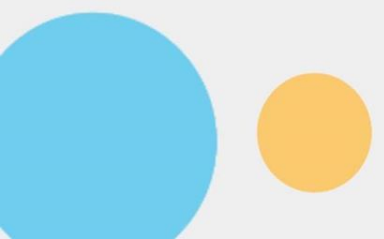


**"When I learned something I realized I could use during travel, that was fun!"**



## Reiko continued

“My son is also interested in English. He’s two years old. He likes watching the Minions movie so sometimes she switches the language from Japanese to English but he doesn’t notice and he watches it with the same pleasure. He is interested in car sounds and animal sounds like honk honk and can say them in English. He also loves animals so he can say some animal names in English and some in Japanese. She hopes he can learn both languages growing up. She thinks it is interesting.”



# Kaede, English School Staff Member

1. Nothing out of the ordinary, but definitely grammar.
2. Children love playing games!
3. Whether or not they are able to learn it and speak it well and how long they are able to carry on an actual conversation. If it is difficult for them to be understood in English.
4. In school or at cram school before or after school.
5. I went to an English language school (Eikaiwa), but I've forgotten everything now.
6. Speaking to foreign teachers who are native speakers. There aren't many foreigners in Japan, so it was a lot of fun to talk with them at my Eikaiwa.
7. The best products are those that can be used on the iPad. Smartphone games are fun too. Robots would be good because the children and practice English conversation with the robot.



**“There aren’t many foreigners in Japan, so it was a lot of fun to talk with them at my Eikaiwa.”**

# Tony, Japanese USA, English teacher, father of 2



1. In your opinion, what is the most difficult thing for children studying English?
  - a. Only using English
2. What is the most difficult part about teaching children English?
  - a. Keep a record of what you've taught them
3. What could improve the way children study English?
  - a. Trick them into thinking they're not studying
4. Did you study any languages as a child? What was the most difficult part of language study for you?
  - a. Japanese. Kanji
5. What in-class activities do you think give children the most opportunity to learn/practice English?
  - a. Classroom English, commands
6. What is the easiest part about studying English?
  - a. 26 characters
7. What concerns do you have about studying English?
  - a. They can't spell, not being able to write.

**"Trick them into thinking they're not studying."**


# My Personal Experience

“Another commonly given excuse for poor development of English communicative skills is the Japanese culture or “character.” It is said the cultural norms mean that Japanese are not willing to speak up in front of others in case they cause a disruption. Plus, they are too afraid of making mistakes and feel they must speak perfect English. In a sense they impose silence on themselves.”

- The Japan Times, “Why do Japanese have trouble learning English?”

While the above statement is not as prevalent in children, as an English teacher, I have witnessed this apprehension in a lot of my adult students. There is a lot of worry of making mistakes in English. It takes time to help some students feel comfortable with opening and being able to speak more freely even if there are mistakes. One of the rules in our children’s courses that is introduced on the first day of class each year is, “Mistakes are OK.”

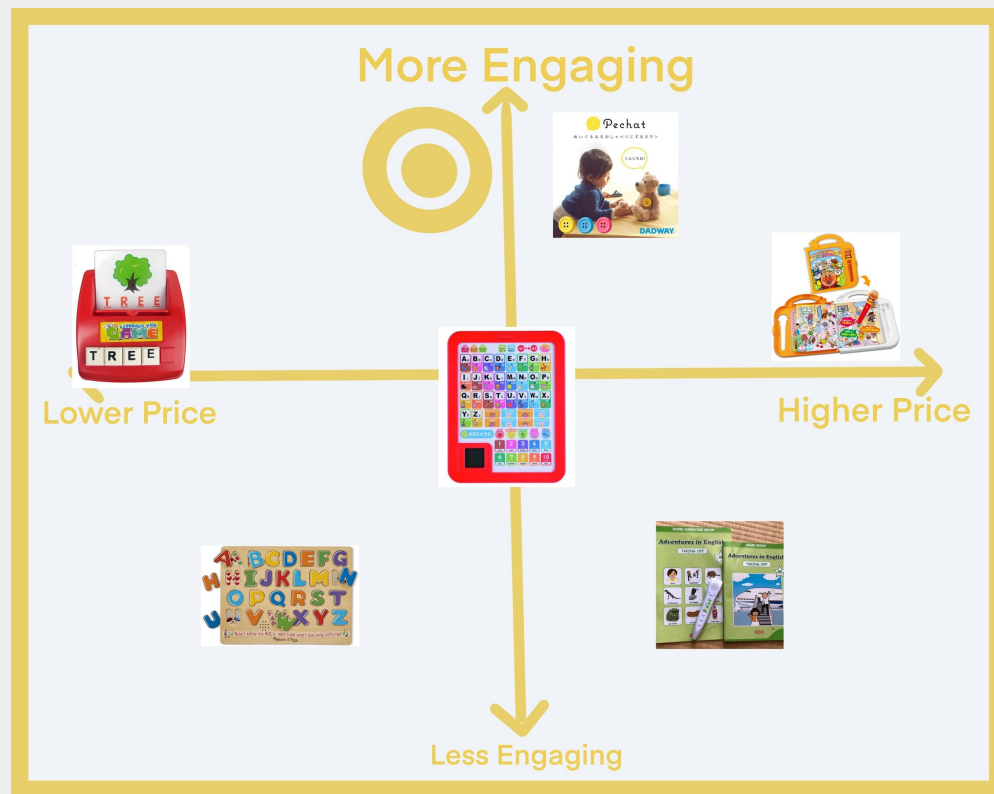
As Reiko mentions, it is difficult to practice English in Japan because there are limited chances for Japanese children to interact with foreign children. Kaede mentioned this as well, stating that her favorite part of English language study was being able to speak with the foreign teacher. My adult students have told me that I was the first foreigner they ever talked to and that they do not have any foreign friends or know any native English speakers. This is one of the major differences between ESL study in the USA and Japan. Students in the USA are able to find practical use opportunities on a daily basis because of regular exposure and being surrounded by the language.



**“Mistakes are OK’ is an idea we must introduce on the first day of class each year.”**

# Important Things to Consider

- How can we ensure this product will be cost effective so more families can afford it?
  - This product needs to use inexpensive technology.







# TARGET MARKET AND STAKEHOLDERS

# User Profile

**Kaho N.** elementary school student

7 years old

Has a single father. Attends cram school regularly. Not yet studying English in school, but wants to study English for when she and her father travel overseas.



# Stakeholder

**Chie S.** stay-at-home mother of two

37 years old

Takes children to Eikaiwa once a week. Plans to move abroad with children for husband's new job assignment.



**Michael A.** English teacher in Japan

26 years old

Teaches all ages, has regular kids lessons multiple days per week both at an Eikaiwa and as private lessons.



# Target Market and Stakeholders

## Target Users

- School-aged children
- Children ages 5-12, elementary school
- Children whose families have recently or are planning to move from a country where the native language is not English to an English-speaking country.
- Children in ESL classes
- Children with busy parents that are unable to take their children to/afford English conversation classes

## Stakeholders

- Governments, the government of Japan wishing to expand English language capabilities for working on the global market and dealing with increased tourism with the Olympics and the Osaka Expo in 2025
- English Language Schools including those experiencing drops in attendance due to timing, costs, etc
- Parents of young/school-aged children

# User Needs and Challenges

- Supplement English education outside of the classroom
- Needs to be practical
- More fun and engaging than books which do not encourage active learning through play
- Needs to help listening skills and speaking skills

# Target User

- Ages 5-12
- Elementary school

# User Environment

- At-home use
- Outside of class use





# Design Goals

Motivate students to practice through interactive play

Engage students with listening and speaking practice

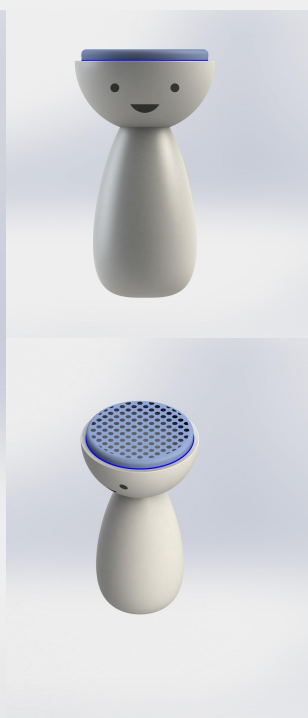
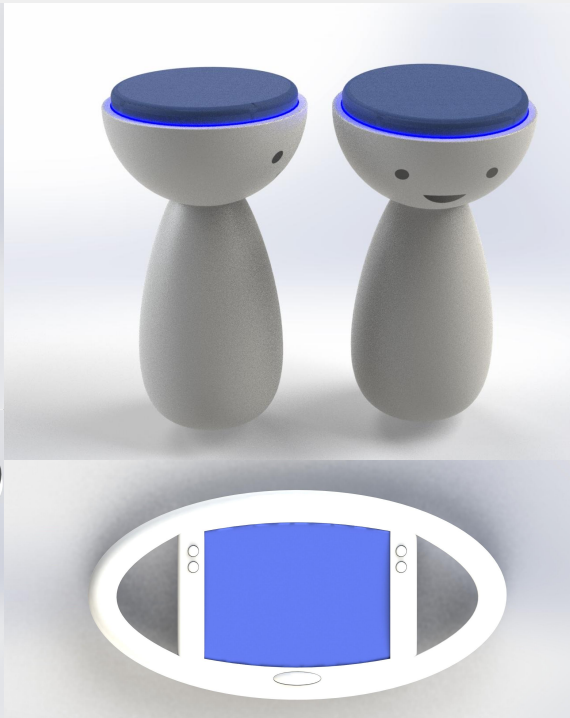
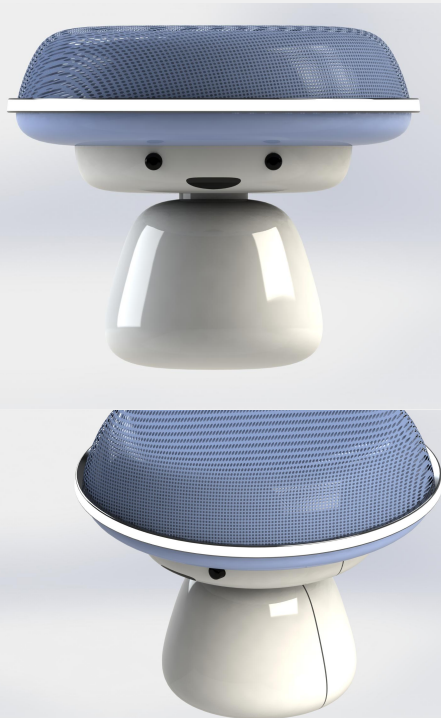
Minimize distraction



**DESIGN**



# Early Concepts





# Target Solutions/Important Features

## Fun/Engaging

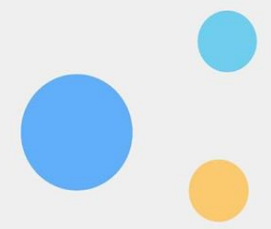
Kids need to be fully engaged to establish persistent, sustained use over a long period of time. Language skills are best developed with daily practice.

## Improves Listening/Speaking Conversation Skills

The main part missing from English language education in Japan is conversational practice. The user should be able to practice using this product.

## Easy to Use

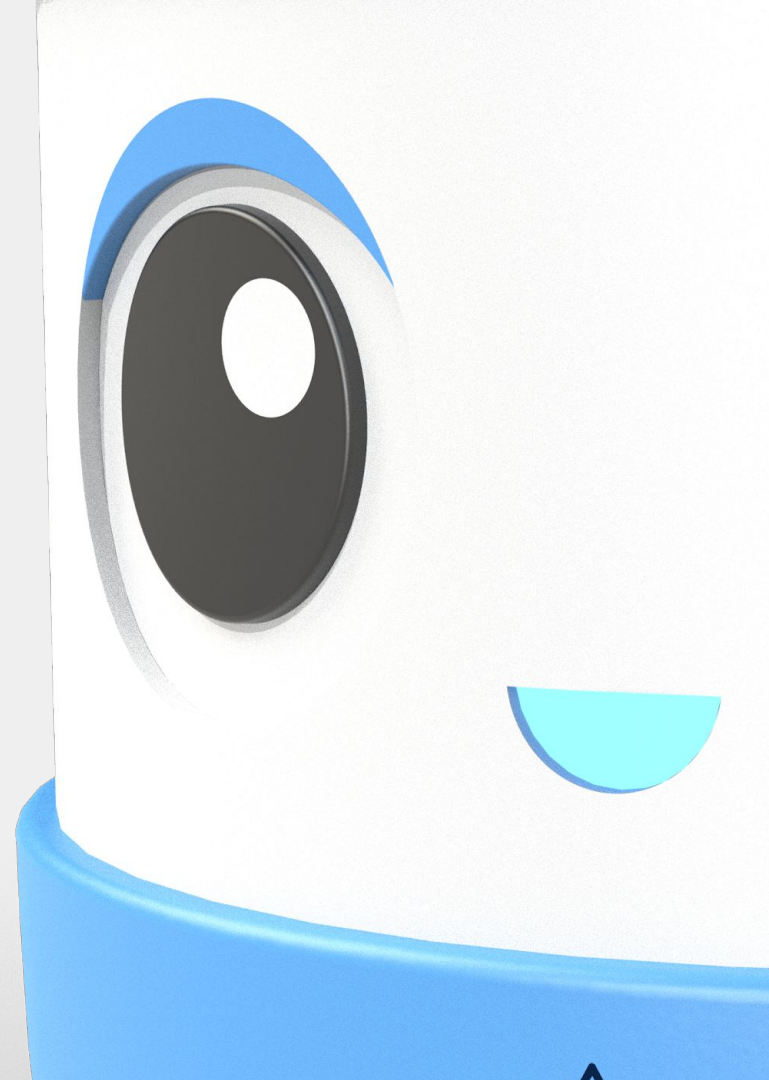
Younger children need a product that is safe and easy to use and does not require the help of a parent or guardian. They need to be able to practice English even when the parent is not able to assist.



# Why

I would like to design a toy, which allows the user to experience interactions using conversational English. This will combine traditional play with e-learning without increasing childhood screen time. Further, like any good toy, the product should be durable, safe, engaging, and versatile.

Helping children during their early and later stages of development can provide them with necessary tools for future work possibilities. This is important for every child, and giving further assistance to children with language learning practice can help them find more opportunities in the future.



# Guiding Questions

What would make learning fun?

What can we do with a boring text book?

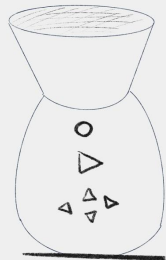
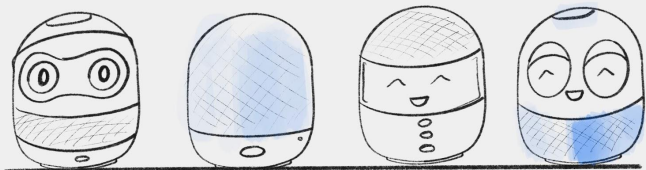
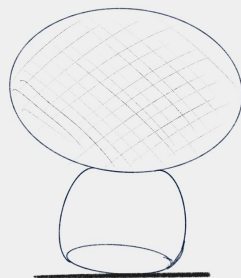
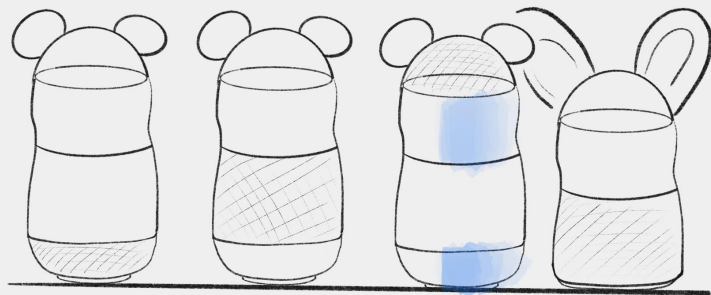
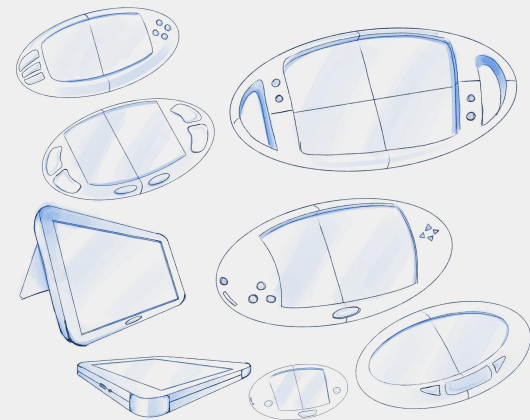
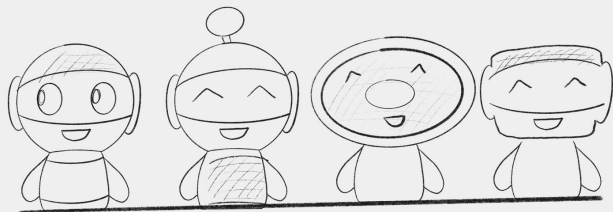
How can we help children learn?

How do we encourage children to speak a language?

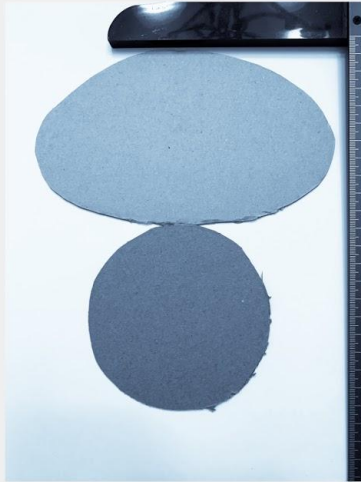
What do children need from a learning tool?



# Initial Sketches



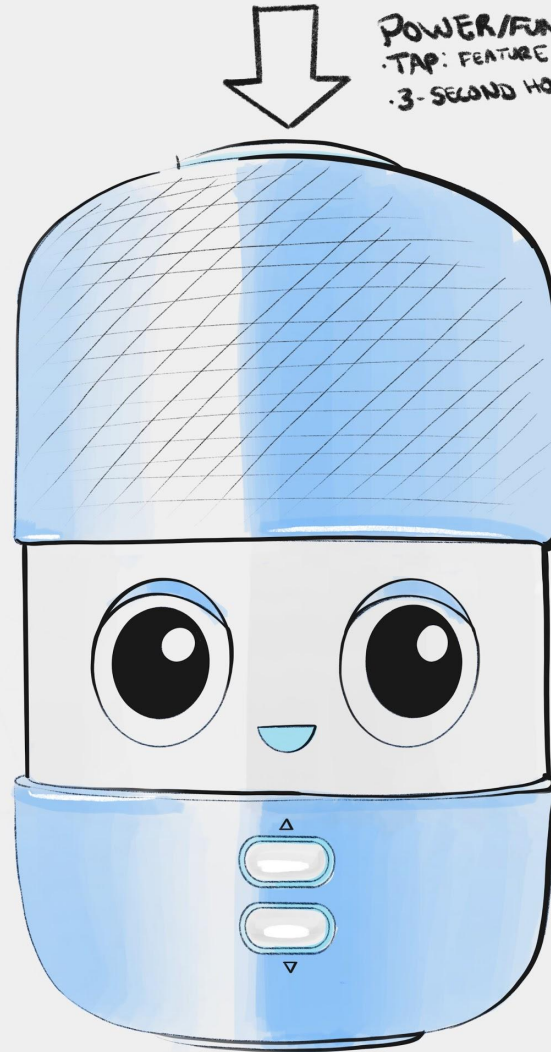
# Sketch Models



# Features

- Must be more fun and engaging than books which do not encourage active learning through play
- Needs to help listening skills as well as speaking skills
- Needs to supplement what is being taught in schools to bring in practical application

MEDIUM  
GLOSS  
PLASTIC  
SOFT TOUCH  
PLASTIC



POWER/FUNCTION BUTTON  
· TAP: FEATURE  
· 3-SECOND HOLD: POWER ON/OFF

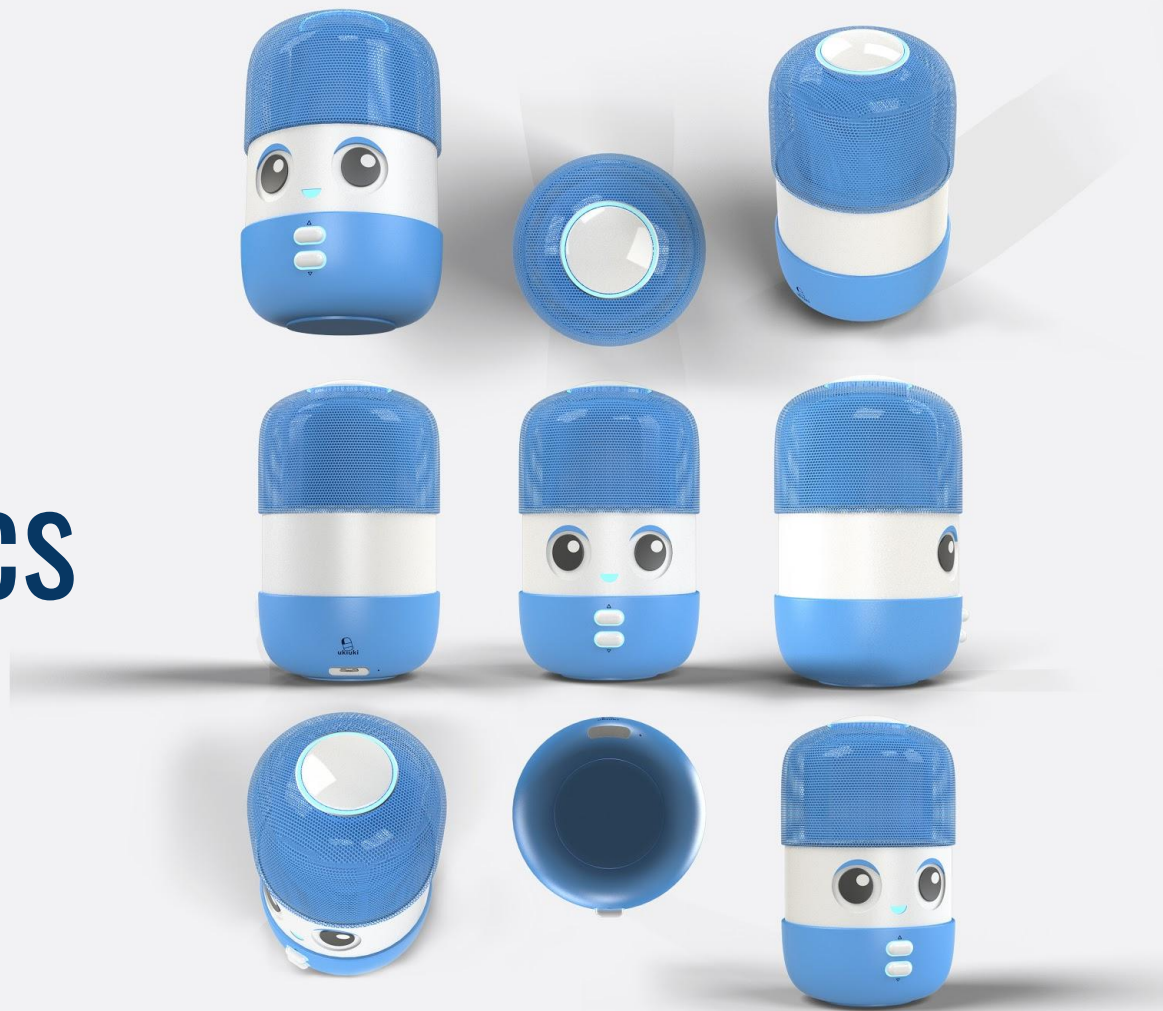
SPEAKER TOP

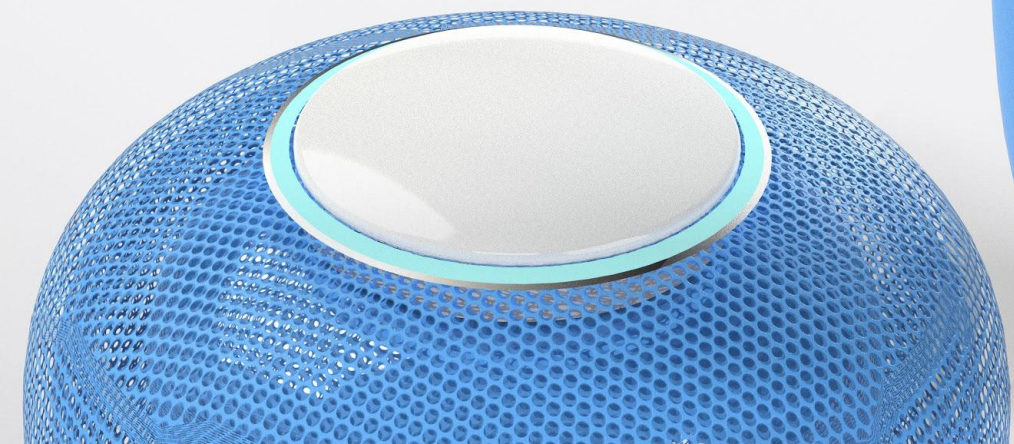
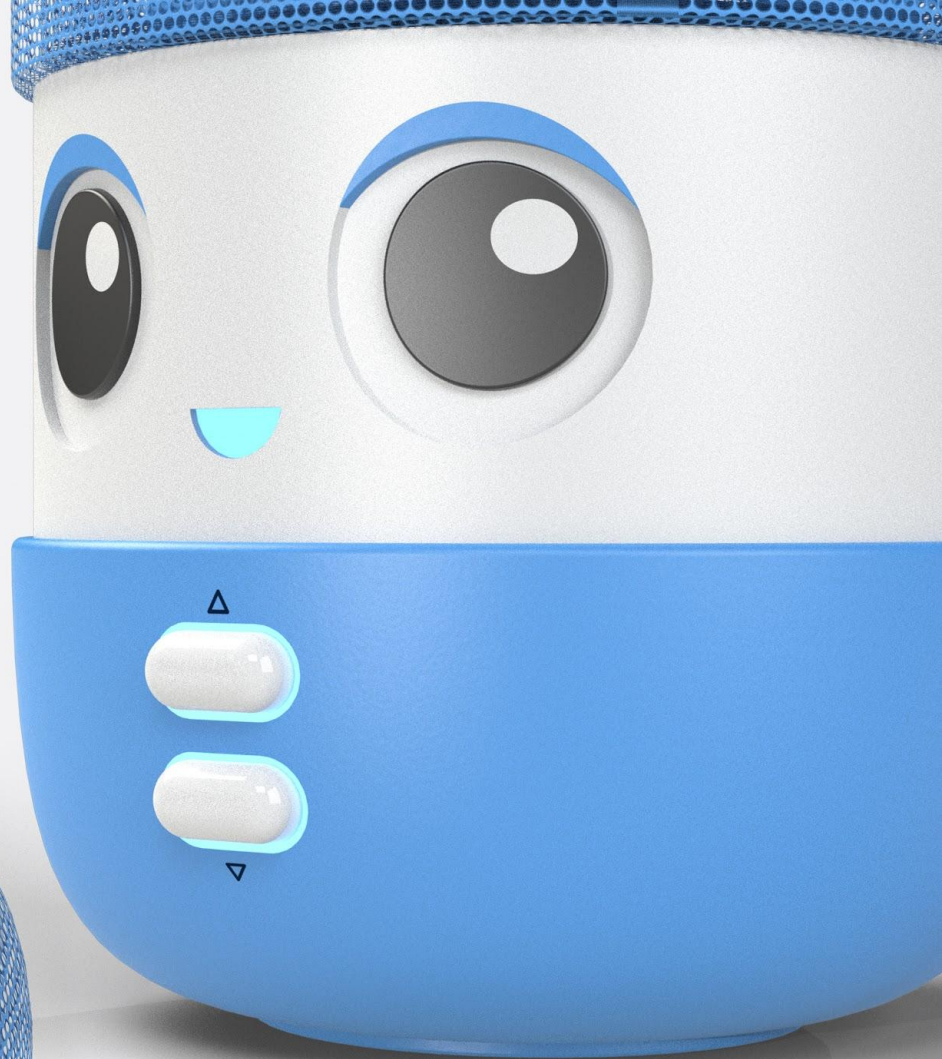
LED  
MOUTH LIGHTS  
UP WITH SPEECH

LIGHTS AROUND FUNCTION/  
VOLUME BUTTONS  
GLOW WITH GAMES



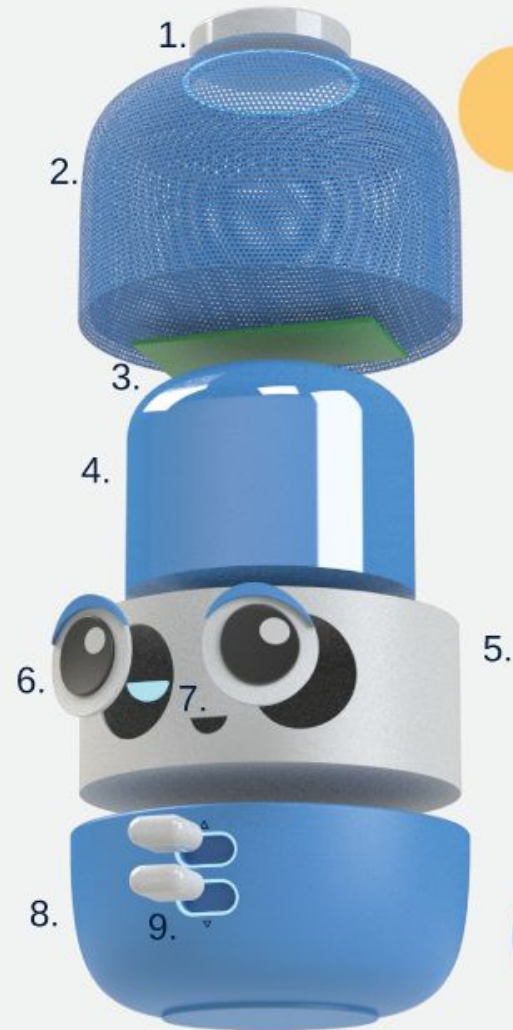
# Orthographics





# Exploded View

1. power/mode button, ABS
2. speaker, PVC coated polyester mesh
3. amp board
4. top housing for speaker, ABS
5. middle housing, ABS
6. eyes, ABS
7. light up mouth, glass/LED
8. bottom housing, ABS
9. volume buttons, ABS





# **MARKETING AND BRANDING**



**Hello!**

**Hi! How  
are you?**



**You can practice speaking any time!**



**英語で遊ぼう!**  
Let's play together in English

遊ぼう~!

**Hello!**

うきうき

**How are you?**

一緒に勉強しましょーう!





top teal

bubbly blue

yummy yellow

**3 Fun Colors**  
for your own style

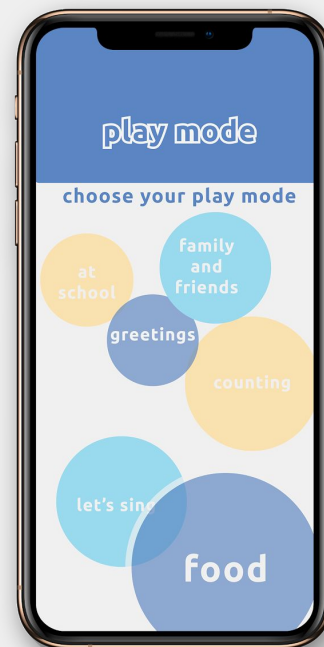
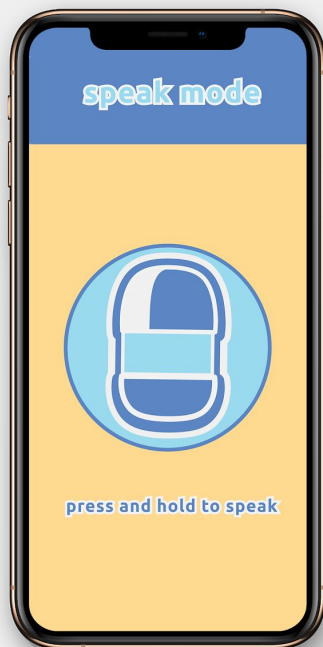


# MOBILE APPLICATION



# Mobile Application

Phone app lets parents switch between play mode, speak mode, and download language packs.



Mommy: What's your favorite color, Taka?



It's blue!

What's your favorite color, Taka?



# Research Journal

Elexis King  
Instructor: Shin So  
IND730 Design Project 3



**FURTHER RESEARCH**

# Important Things to Consider

- What are the toy interests for Japanese children of this age group?
- How can we ensure this product will be cost effective so more families can afford it?
- How can it be upgraded to continue to include more vocabulary and speaking abilities?
- Will we need to use language and vocabulary packs instead of upgrades?



# Important Things to Consider: Answered

- How can it be upgraded to continue to include more vocabulary and speaking abilities?
  - USB plug in upgrades or WiFi downloads
- Will we need to use language and vocabulary packs instead of upgrades?
  - Software, or separate learning packs that parents can purchase



# Analysis

How can we develop a product that helps children understand and practice English language communication and conversation skills in the absence of opportunity to speak with Native speakers?

- Considering the amount of ESL students in the United States alone, we can see that there is a big difference between being able to use the language on a daily basis and not being able to.
- In Singapore, English is one of the official languages, so children are able to practice during daily social interactions
- Japan's drop in proficiency ranking does not suggest a drop in the education system, but rather a failure to adapt to a changing international educational environment. Though we cannot change the way language is being taught in Japan, we can change the way students practice outside of the classroom.

# Pros and Cons of Current English Learning Methods

## English Classes in School

### Pros

- Children can hear correct pronunciation
- Easy to use
- Fun and engaging

### Cons

- Repetitive
- Doesn't allow for imaginative play

## Eikaiwa (English Language Schools)

### Pros

- Children can practice spelling and reading
- Parents and children can play and practice together
- Flashcards can be used for used for many types of games including memory games and concentration

### Cons

- Flashcards are repetitive
- The objects on the cards are not tangible
- Doesn't allow for dynamic, imaginative play



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# **FURTHER INTERVIEWS AND OBSERVATIONS**

# My Teaching Observations

Forty-minute lesson, three students, ages 3-4 years old

- Youngest student gets upset when she can't answer first
- One student is really proud of himself because he is able to say a lot of the vocabulary (he said he practiced at home)
- All students enjoy story time
- Enjoy pair card games
- Enjoy matching memory game
- Able to answer target question of the day, "How are you?" After a lot of practice. Two students would repeat the question to me instead of answering. Hard to suggest question/answer to younger students.



# The Questions, English Teachers

1. In your opinion, what is the most difficult thing for children studying English?
2. What is the most difficult part about teaching children English?
3. What could improve the way children study English?
4. Did you study any languages as a child? What was the most difficult part of language study for you?
5. What in-class activities do you think give children the most opportunity to learn/practice English?
6. What is the most useful thing students can do to improve their speaking skills?
7. For children studying a language, what kinds of products do you think look interesting or fun?

# The Questions: Staff and Sales

1. What is the most difficult thing for children studying English? 英語を勉強してるの子供達にとって、一番難しいことは何ですか？
2. What do children love the most about learning English? 英語の勉強について、子供は何が一番好きですか？
3. What are parents' biggest concerns about studying English? 両親の一番大切な心配事は何ですか？
4. How do children usually study English in Japan? 普段、日本人の子供はどうやって英語を勉強しますか？
5. How did you study English when you were a child? 一さんは子供の頃、どうやって英語を勉強しましたか？
6. What do you wish you had to study English when you were a child? What did you think was fun for studying when you were a child? 子供の頃、勉強するために一番楽しかったことは何ですか？
7. For children studying, what kinds of products do you think look interesting or fun? 子供の勉強のため、どんなプロダクトとかは楽しそうか面白そうと思いますか？

# The Questions: Parents and Children

1. What is the most difficult part about learning English? 英語の勉強にとって一番難しいことは何ですか？
2. What is the easiest part about studying English? 一番簡単のことは何ですか？
3. What concerns do you have about studying English? 英語の勉強の心配ことは何ですか？
4. What's your favorite way to study English? 英語って、どんな勉強が好きですか？

## Rikako, Parent and Child, 2 years old

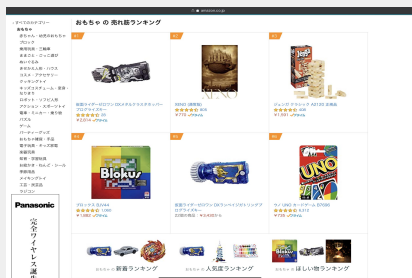
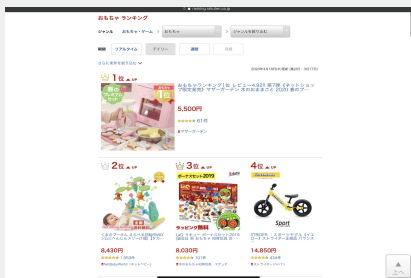
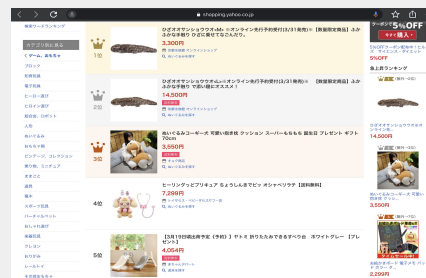
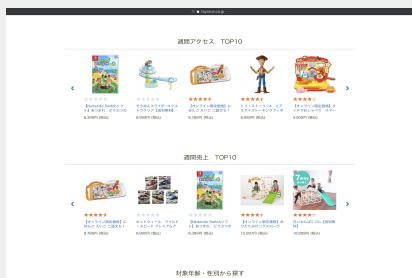
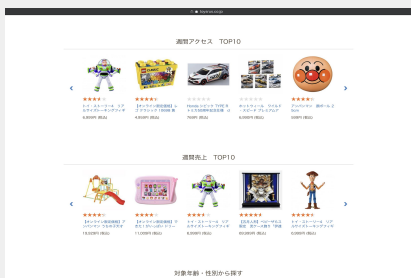
1. Getting my own pronunciation correct and trying to get my daughter to say things the right way too.
2. We can study together by using flash cards and watching kids shows in English on TV or Netflix.
3. I hope that my daughter is able to practice English outside of school when she is older.
4. We like to study using games.

# Ikuko, mother of three, 9, 11, 12

1. Getting my children motivated and keeping their interest. They often say they are bored or complain about having to go to English classes. Reading and writing is the thing they struggle with the most.
  - a. Side note, I taught her youngest son. They were often late for his private lesson because he spent a lot of time complaining about having to take the lesson. He enjoyed it while he was there, but did not like the idea of going to more classes.
2. Speaking. My husband is American, so they are able to speak well.
3. I am not sure how to encourage them to keep studying and reading at home.
4. They enjoy reading and playing games. We have some typing games which helps a little bit.

# Important Things to Consider: Answered

- What are the toy interests for Japanese children of this age group?
  - These days, the most popular toys for children in Japan are games with puzzles that require some sort of critical thinking skills, toys that mimic adult life such as kitchen items, action figures, plush toys, and toys that can talk. There are even two English learning toys in the top ten rankings on the Toys R Us Japan website.





# Tablet Toys

These two toys function in a similar way. The pink one is a tablet that has various activities on it such as drawing and racing games. It is meant for ages 18 months to 6 years. The Anpanman character tablet is meant for English language learning and uses the touch pen feature. This toy is in the top ranking and is meant for ages 3+

おもちゃならトイザらSTOP ▶ 知育玩具 ▶ 子供用パソコン・タブレット ▶ タブレット ▶ その他タブレット ▶ 【オンライン限定価格】 できた！がっばいドリームトイパッド 【送料無料】

【オンライン限定価格】 できた！がっばいドリームトイパッド 【送料無料】  
タカトミー  
対象年齢：18ヶ月～6歳

★★★★☆ 4.1 (40)

送料無料 店舗受取可

発売日：2016年07月21日  
● 電池別売：単3電池x4  
● ギフトラッピングできます

55ポイント  
キャッシュレス還元事業対象

在庫あり 数量：1 配送・その他

本日 4 人がこの商品を購入しています

電池があればすぐに遊べます！

1,099円 (税込) トイザらスオリジナル アルカリ乾電池 単3形 20本パックをショッピングカートに追加する

お気に入りに入れる カートに入れる ▶

クイック購入 ▶ 詳細 ⑦

クイック購入するにはログインが必要です

在庫のある店舗：95店舗

おもちゃならトイザらSTOP ▶ 知育玩具 ▶ アンパンマン 知育玩具 ▶ 【オンライン限定価格】 にほんご えいご 二語文も！アンパンマン おしゃべり いっぱい！ことばずかんSuperDX 【送料無料】

【オンライン限定価格】 にほんご えいご 二語文も！アンパンマン おしゃべり いっぱい！ことばずかんSuperDX 【送料無料】  
セガトイズ  
対象年齢：3歳～

★★★★☆ 4.6 (63)

送料無料 店舗受取可

発売日：2017年2月  
● 電池別売：単4電池x2  
● ギフトラッピングできます

43ポイント  
キャッシュレス還元事業対象

在庫あり 数量：1 配送・その他

本日 20 人がこの商品を購入しています

電池があればすぐに遊べます！

1,099円 (税込) トイザらスオリジナル アルカリ乾電池 単4形 20本パックをショッピングカートに追加する

お気に入りに入れる カートに入れる ▶

クイック購入 ▶ 詳細 ⑦

クイック購入するにはログインが必要です

在庫のある店舗：98店舗

# Games and Technology

From my teaching experience, the things that work best for children in the classroom are activities where they are actively engaged in play and using English without thinking too much about it. When they have to be sitting still around the table, the young students are often antsy and some of them are disinterested. They always ask, “Game??” Even though they are using English and actively learning and practicing, they do not notice it and get more out of the lesson when they are able to just play together. This is important for the design solution. It needs to be fun. Using technology is important because all of the students in the class use a small children’s phone to keep in touch with their parents. They often play games with it as well.



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