





Bilingual By Design

DESIGN STUDY: Toy Design and Material Play Culture
for
Children Bilingual in French and English, ages 6-8
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Definitions of bilingualism

- Bilingualism = “the alternate use of two or more languages by the same individual” (Mackey, Wei, 2000, page 27). In this study, the term “bilingual” will be used to describe individuals who use both languages on a regular basis, regardless of whether they are equally proficient in both (Grosjean, 1982)

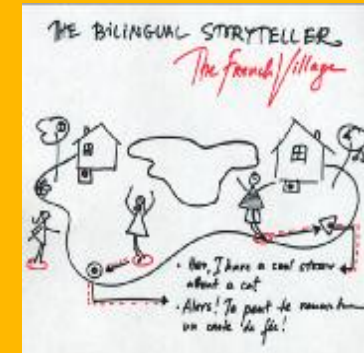
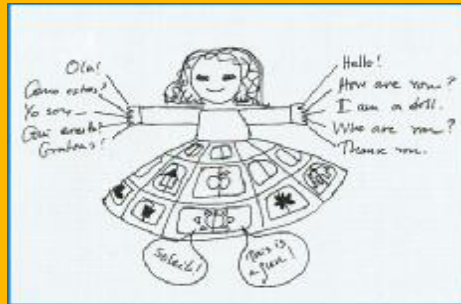
Bilingualism in the united states

Mono-lingualism = Normalcy in the US media, product design and research (D. Sommers, Harvard University). Reasons: the bilingual market is segmented and understudied; production difficulties in bilingual design, historical bias against bilingualism.

Yet:

- More than 10% US population is bilingual
- Bilingual education does not always answer the needs of bilinguals, thus leaving a market niche for new product development
- Potential global market? More than half of the world's population is bilingual.

Why explore bilingual design?



1. Accommodating the needs of bilingual US families and new immigrant families;
2. Increasing the sense of "normalcy" and pride for bilingual children, a growing minority group in the US;
3. Providing a learning experience in both languages.
4. Continuing a research tradition: toys have already been used to promote literacy (Justine Cassell, MIT Media Lab)

The role of toys in the family

(Brian Sutton-Smith, 1986) Theory:

- Toys are often used as one of the most stable ways in which a culture over-determines the roles and stereotypes it considers essential.
- Toys as a gift can reinforce the bond between parents and children, while also isolating the child to a sphere of lonely play activities.
- Toys provide the child with a sense of agency and contribute to one's formation of identity.
- Toys can provide educational activities for the child.

(Seiter, 1993) Theory:

- Parents and children understand toy in different ways.

The role of Bilingual toys in the family?

Bilingual tangible toys can have a number of beneficial effects on bilingual children:

- Bilingual toys can be used to reinforce the social presence and value of bilingualism as a phenomenon in the United States + motivate the children to use both languages.
- A bilingual toy can reinforce the child's sense of confidence in being bilingual.
- Social play and individual play with the toy will have different effects on the child
- Bilingual toys can help early develop early literacy in both languages in a friendly context.

Design Schedule: The Rise of the Polka Dot



DESIGN
ELECTRONICS
METHODOLOGY
TESTING



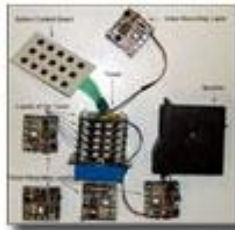
OCTOBER

DECEMBER

FEBRUARY

APRIL

NOVEMBER



"HOW TO MAKE ALMOST ANYTHING?"

INTERVIEWS WITH TEACHERS, AMIGOS BILINGUAL PROGRAM
INTERVIEWS WITH TEACHERS AT ECOLE BILINGUE

JANUARY



TOY FAIR, NY!

MARCH



MAY

TOY STUDIES ECOLE BILINGUE 1
TOY STUDIES ECOLE BILINGUE 2
TOY STUDIES FRENCH CENTER 1
TOY STUDIES FRENCH CENTER 2

Prototypes 2 and 3

LISTEN + RECORD + SAVE
+ PLAY STORIES in
French and English

- The language aspect: short catchy phrases easy to incorporate in narrative play, translation in both languages, the benefit of repetition
- The social role: connection between parents and children
- The design: gender-neutral, safe, kid-friendly language
- The electronics: 6v battery, speaker, chip, audio recoding





Toy study Methodology

- WHAT IS A DESIGN STUDY?

A design study presents a controlled intervention in a multi-factor environment (a classroom, institution or social group), (Zaritsky, Kelly, Flowers, et al., 2003.) Bilingual by design uses a toy prototype to begin a conversation about bilingual media.

- APPROACHES:

1. Toy testing with children
2. Interviews with parents, teachers and bilingual children

Locations and Participants



- Ecole Bilingue: interviews with 6-10 students, 5 teachers
- French Center: interviews with 4 bilingual families

Findings and analysis

- The children tend to use English, the majority language in the US, as their main language for social activities. Their development in French language is culture is only possible through the continued efforts of their parents and teachers.
- Favorable response to parent / child collaboration: the parents are the driving force of the bilingual development of the children. The toys become learning tools in the context of child/teacher or child/ parent collaboration.
- Bilingual children have different skill sets in each language. The parents with children with high proficiency in both languages prefer toys that involve cultural content; parents with children who are still learning one of the language prefer toys that include both languages at a simple level.

Suggestions for bilingual media design:

1. Bilingual design should support the needs of families coming from a variety of linguistic and cultural backgrounds through language level design and culturally diverse stories.
2. Toys should situate the use of different languages within a context that strongly motivates the use of either language.
3. Bilingual design should support parent/child interaction as well as independent play.

Future work:



- SAM: The Bilingual Virtual Peer, Gesture and Narrative Language Group, Media Lab, MIT



- Leap Frog Technology



- Bilingual Computer Games

Thesis structure

- Bilingualism and Culture
- Bilingual Toys and the Family
- Methodology and Analysis
- Conclusion

Thesis Chapters

1. Intro
2. Bilingualism and Language Acquisition
3. Bilingualism in the US
4. The Theory of Toys
5. Literature Review
6. Methodology
7. Design Process
8. Toy Study Analysis
9. Future work

Thank you. Your questions, please...
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