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Establishing an inclusive and sustainable design program for assistive technology



Joseph J. Lawler, Keshia M. Peters, Alyssa M. Spomer and Katherine M. Steele

Mechanical Engineering, University of Washington, Seattle, WA

What is HuskyADAPT?

- HuskyADAPT stands for Accessible Design and Play Technology; the program just completed its first year and is already incredibly successful
- A program that teaches students about inclusive design through toy and ride-on car adaptation and year-long design projects

What is Accessible Design?

- A design process in which the needs of people with disabilities are specifically considered [1]

What makes a program sustainable?

- Focused on preservation and transfer of information
- Information is organized in a way allowing others to learn from, replicate, and iterate upon our work

Design Projects 2017-2018

How do we ensure sustainability of projects between years? How do we share results with the broader community?

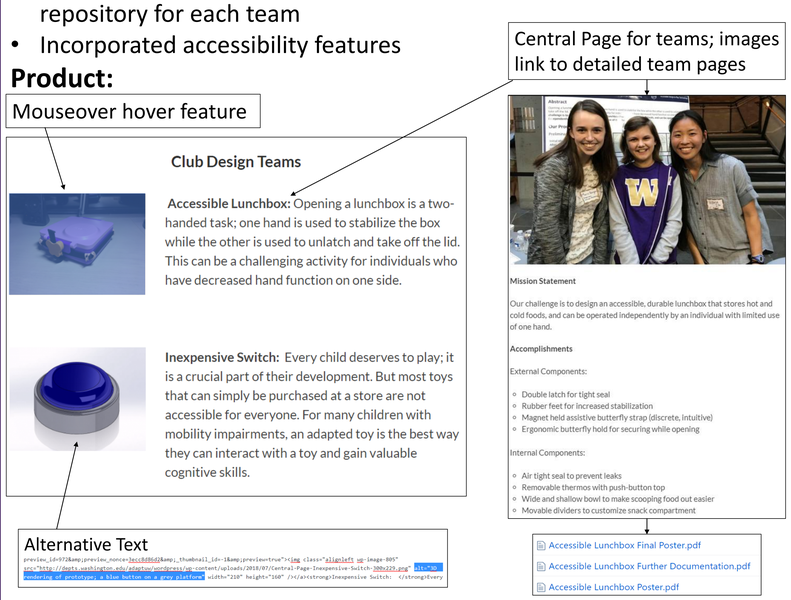
Need:

- A website that ensures the sustainability of the club and showcases past accomplishments

Process:

- Investigated current models for showcasing research and projects
- Posted mission statement, accomplishments, next steps and GitHub repository for each team
- Incorporated accessibility features

Product:



The website workflow is now more intuitive and organized so the information is accessible. There is now a system in place for future teams to upload their documentation.

Furthering a Design Project

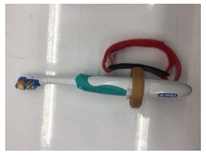
How can we help individuals with limited hand function perform daily hygienic tasks?

Need:

- A modular system that allows individuals with varying dexterity foster greater independence in their daily life, specifically to manipulate a toothbrush

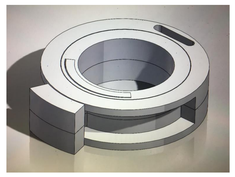
Product:

- Team Cajun created a tool that allows the user to effectively manipulate a variety of objects
- Final design allows full rotation laterally and an axial rotation of 270 degrees
- Thin lightweight design offering maximum mobility

Continuation:

- Design a tool specifically for **need expert** Erin Ciliv
  - A need expert is a community member who provides invaluable insight on a particular disability
- Iterated through three designs based off user feedback
- Device builds upon Erin's ability with her left hand; rotates toothbrush 180 degrees




Building upon team Cajuns work, I was able to design a similar device specifically for need expert Erin Ciliv. Erin now has the ability to brush her teeth with just her left hand.

Design Challenges 2018-2019

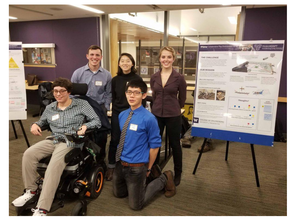
How do we reach out to need experts for design project ideas and partnerships? How do we pick design projects for impact?

Need:

- System for reaching out to need experts and creating design challenges for next year

Product:

- **Need Expert Survey** –document to collect design ideas and set expectations for team members; incorporated feedback from experts in the field
- **Centralized repository** –document containing contact information of all of our community members
- **Interview guidelines** –document to be utilized in meetings with need experts, ensures the correct information is gathered
- **Design Challenges** –one page summary of each design challenge for incoming student teams, providing detail and direction

Future:

- Documentation will be used in upcoming meetings with need experts to prepare design challenges, continue to iterate upon the format based off of feedback
- Continue to expand our network of community members

Student teams and need experts are set up for success by establishing realistic expectations and desired outcomes before the design process even starts.

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References

1. Washington.edu. (2018). What is the difference between accessible, usable, and universal design? | DO-IT

Acknowledgments

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