

Accessible website access: using makaton animation with voice assistance to help makaton users improve the 'join a session' process experience

by LEYAN ZHANG

ABSTRACT

The project aims to answer the question, "Can Makaton sign language be converted into Makaton animations (GIFs) and used in the 'join a session' process to help improve accessibility and text message comprehensibility?"

The web environment is less inclusive of the disability community, and the web accessibility needs of different disability groups need special attention. The study goal is to explore further the possibilities of using the Makaton sign-in web access. Supported by evidence from literature, user studies, and field experiments, this will help develop research on the potential of sign conversion to 2D Makaton animation to enhance accessibility.

INTRODUCTION

Joy of Sound is a charity dedicated to promoting social equity and inclusion. It is mainly for marginalized people such as the elderly, refugees, excluded / transitional children, and children with SEN, facilitating through music and combined art activities.

In the context of the widespread use of the digital web, JOS faces a severe problem in those participants who are not fluent in using text find it difficult to access the site without difficulty. Therefore, JOS hope to make the web more inclusive and user-friendly through Makaton to enhance the web access experience for JOS participants with learning disabilities and learning

METHODOLOGY AND RESULT

The survey covered questions about daily Makaton usage, web usage, web access barriers, and web experience feedback. The survey uses a combination of three qualitative research methods: direct observation, Contextual inquiry interview, and focus group, with two direct observations, two Contextual inquiry interviews, and a focus group of 5-10 stakeholders (staff, parents, and career). Research results show that most of the JOS participants were taught the Makaton sign during the live sessions and could using as simple communication. However, only a few participants went through systematic Makaton sign learning.

Due to the specific nature of the JOS participants, they were less cooperative when conducting the Contextual inquiry interview. Most survey findings are obtained through in-situ observation, direct observation, and a focus group with the JOS staff. It is worth noting that during the background survey interviews, participants were also asked to use the web to access the 'Join a Course' module to find out about courses they were interested in. Both participants could not access it successfully and gave feedback that it was difficult to read because of the amount of text on the interface.

SAY

"I have never used the interface"
"I can't understand the text"
"I need help"
"I can't read the text on the interface"
"Too much information on the interface"
"I don't know how it works"
"I cannot access independently"

SEE

Intensive and lengthy texts
Confusing interface layout
Textual content that cannot be understood
Pictures of incomprehensible meanings

DO

Need to check session dates, times and locations
Find out about sessions through family, friends or carers
Accessing the website with external help
Stop using the website after a failed access

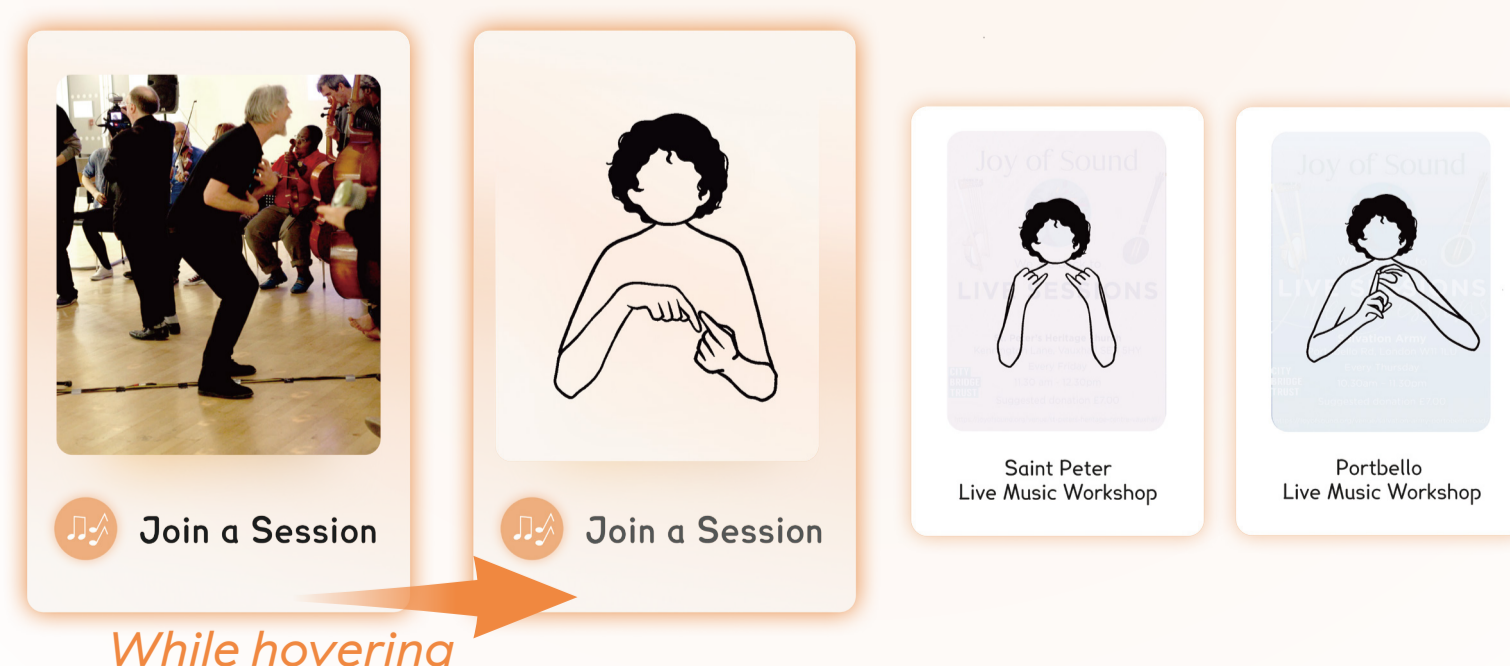
THINK

What do these words mean?
How can I find the information I want?
What should I do next?
Where should I click?



MAKATON ANIMATION DESIGN AND TEST

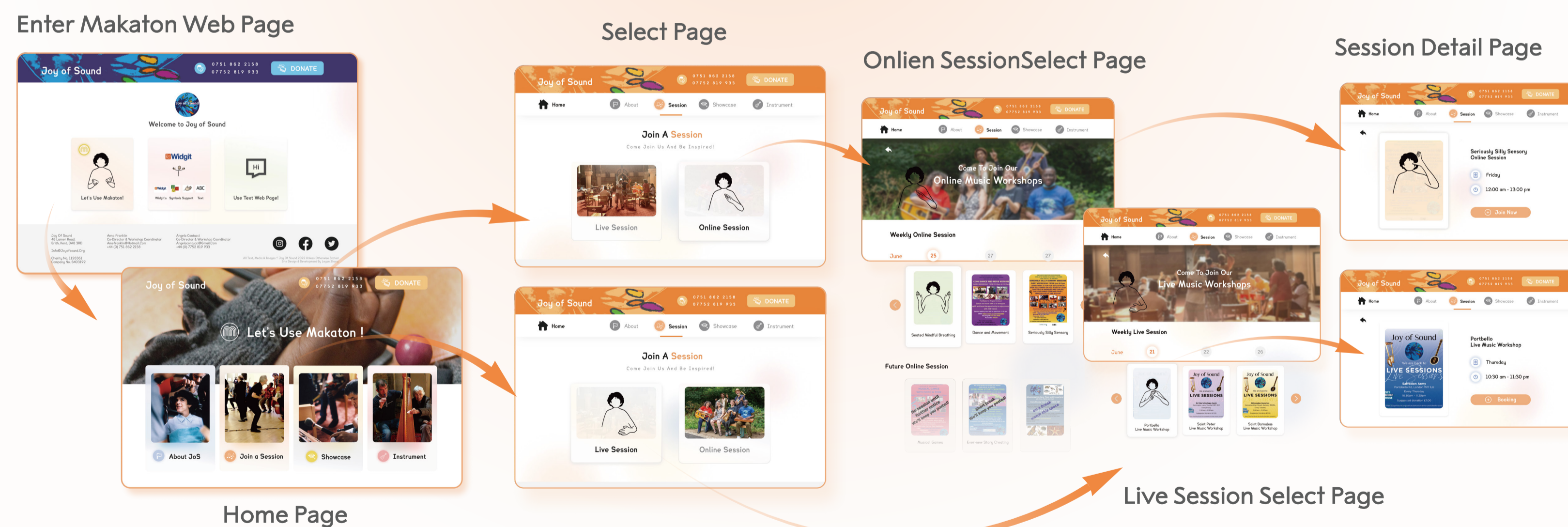
The findings on the comprehension of the Makaton symbol provided a theoretical basis for the visual style of the Makaton animation. The original version of the Makaton animation was validated by a comprehension survey, which evaluated that 1) three participants could understand 80% of the animation, and 2) the addition of speech to the animation reduced the difficulty of understanding the text. The interpretation could be biased because the Makaton animation was applied to the web. Therefore, a second design was implemented after a Heuristic Evaluation (first sound usability test) (replacing distinctive signs with more easily understood common signs).



PROTOTYPE AND TEST

Card sorting test and design hypotheses were beneficial in designing the 'join a session' process and driving the completion of the mid-fidelity prototype. Scenario testing was used to identify usability issues.

The first click test was completed using eye tracking technology and the Wizard of Oz method. The data and results collected helped analyze the layout of the information and the usefulness of the Makaton.



CONCLUSION AND FURUEW RESEARCH

The project validated that it was possible to apply makaton to web access and improve accessibility by transforming sign into 2d animation. Although the final solution was advanced by continuous testing and iterations, the actual sample size was limited due to testing.

In order to demonstrate the possibilities of using makaton animation for the web in greater depth in the future, a large number of people with learning disabilities and learning difficulties who have systematically learned makaton will need to be studied and analysed. If successful, makaton animation can be applied to more web access scenarios.