

Computer Engineering Program

# Research on Web Accessibility for the Elderly in Hong Kong

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## Motivation

Population ageing is an enduring trend all over the world, including Hong Kong, and so as to the web usage ageing problem. However, most of the websites nowadays are not well prepared for elderly web users. So we want to find ways to help the elderly.

We also hope that this project will help on raising the awareness of web developers to develop websites with higher level of web accessibility for the elderly.

## Web Accessibility

According to W3C, web accessibility is an ideal concept in which people with disabilities and older web users can view web content just as easily as normal people can. It is primarily achieved by following web accessibility guidelines in the underlying HTML code. Examples include alternate text for images and keyboard input for people who cannot use a mouse.

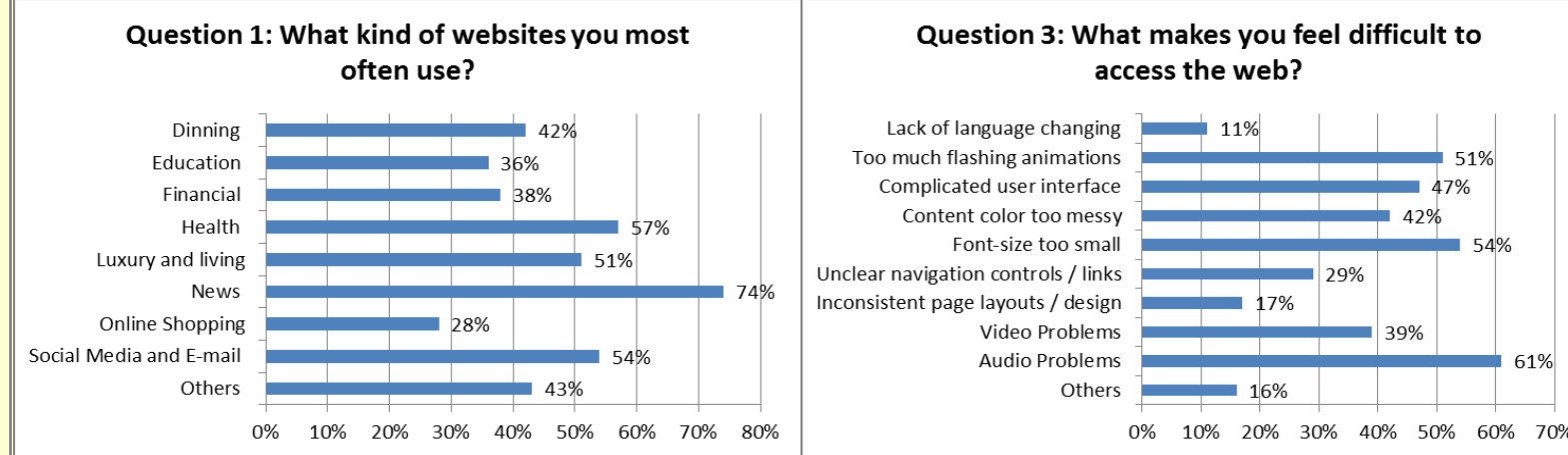


## Working Plan

1. First Survey Regarding Web Usage of the Elderly and Research on Web Accessibility
2. Analyze First Survey Results
3. Develop Our Own Web Accessibility Standards for the Elderly
4. Pick Popular Websites and Rate Them
5. Design Solutions to Help the Elderly to Overcome Web Accessibility Problems
6. Test Our Own Web Accessibility Standards for the Elderly with Second Survey
7. Test the Solutions with Third Survey
8. Refine Solutions by Reviewing Third Survey

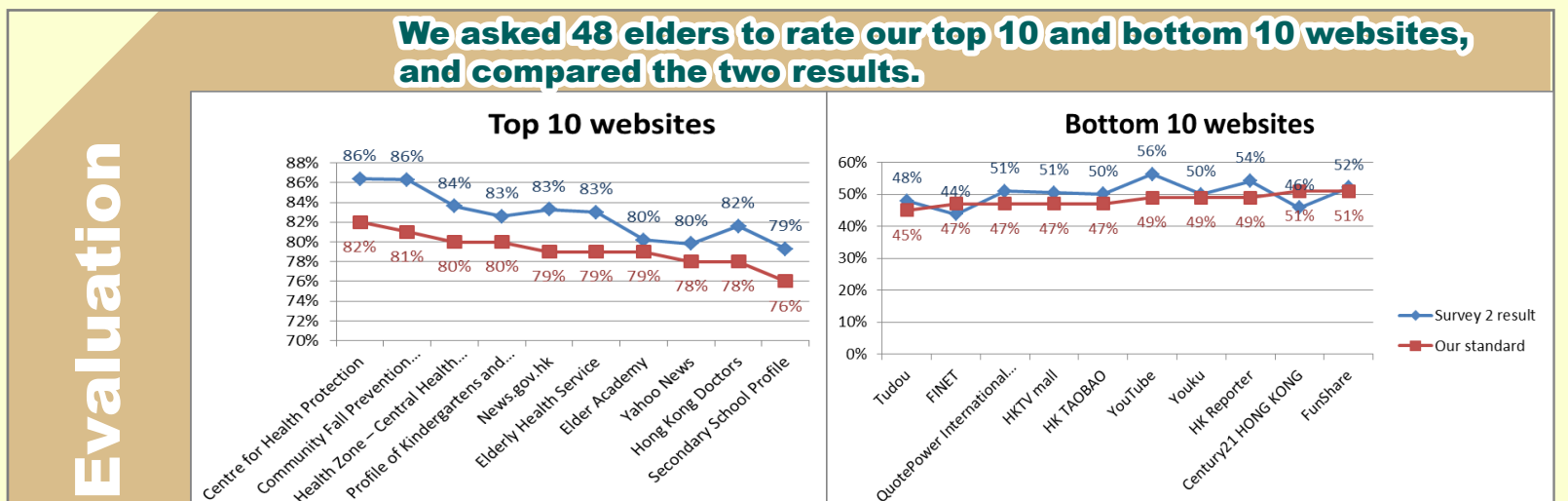
## Survey on web usage of the elderly in Hong Kong

We interviewed 82 elders in total; below are some of the results of the survey:



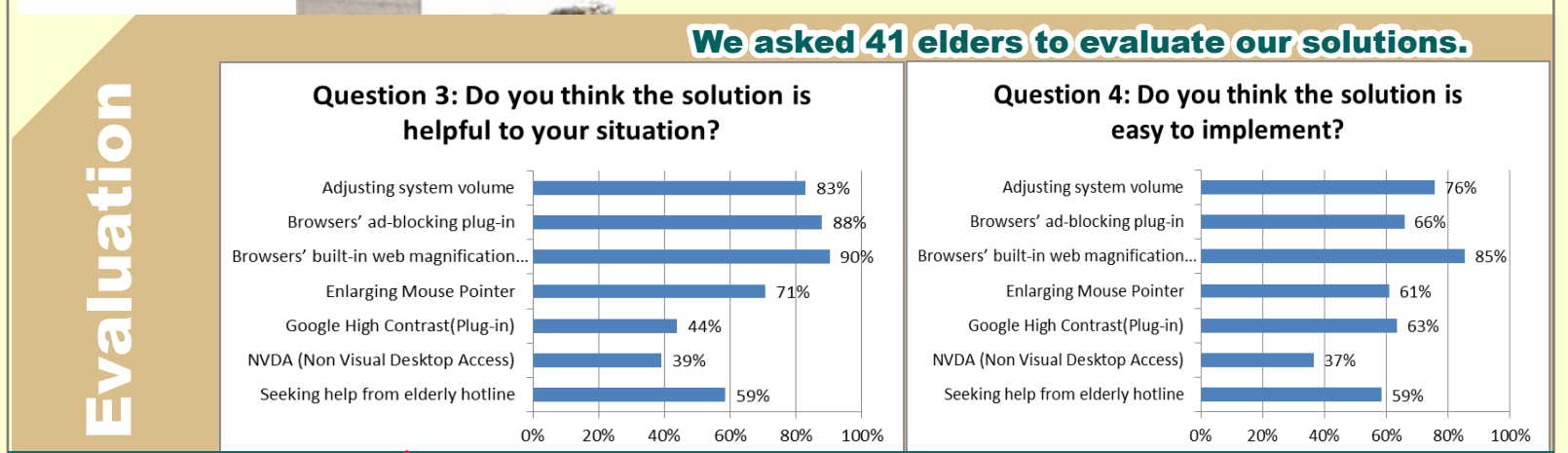
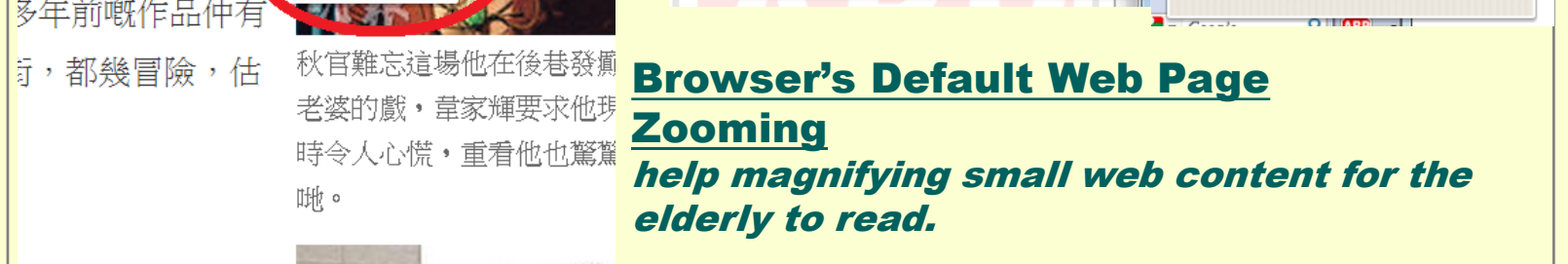
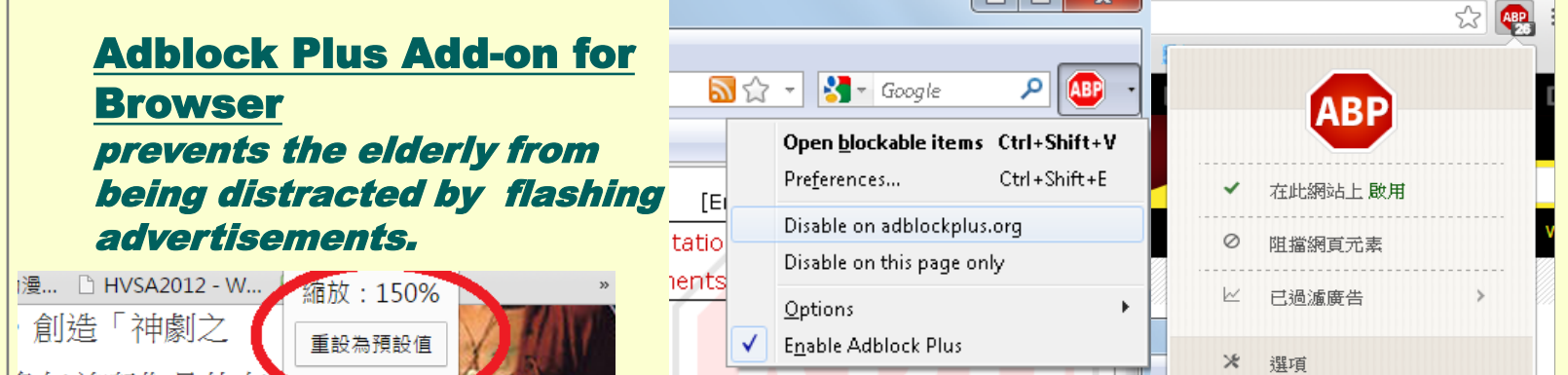
## Our standards for the elderly

- 1) Alternate Text for Non-text Content
- 2) Captions for Audio Tracks
- 3) Audio Descriptions
- 4) Clear Labeling and Categorization for Links
- 5) Sensory Instructions for/addition to Text Instructions
- 6) Avoidance of Reliance Upon Colors
- 7) Audio Control Availability
- 8) Good Contrast Between Text and Background Colors
- 9) Resizable Text
- 10) Avoidance of Images of Text
- 11) Low or No Background Audio
- 12) Clear and Tidy Visual Presentation
- 13) Keyboard Input Capable
- 14) Keyboard Control for Popups
- 15) Timing Adjustable
- 16) Time Limit Avoidance
- 17) Control Over Moving or Changing Content
- 18) Limited Flashing
- 19) Links to Main Content on Every Page
- 20) All Pages Titled
- 21) Logical Order of Page Content
- 22) Links' Purposes Clearly Stated
- 23) Multiple Access Paths
- 24) Descriptive Headings and Labels
- 25) Visible Text Field Focus
- 26) Minimal Interruptions
- 27) Continuity After Session Expiration
- 28) Website Location Identification
- 29) Good Section Headings
- 30) Language of Page Defined in HTML
- 31) Fixed Context on Focus
- 32) Fixed Context on Input
- 33) Error Identification
- 34) Error Recovery Suggestions
- 35) Labels or Instructions
- 36) Consistent Navigation
- 37) Consistent Identification
- 38) Error Prevention Measures
- 39) Unusual Words Defined
- 40) Abbreviations Explained
- 41) Change in Context Upon Request
- 42) Easy Reading Level
- 43) Relevant Help Available



## Solutions for the elderly

We found 9 solutions to help the elderly access the web before it is improved. Here is some of them:



## Conclusion

In this project, we developed 43 web accessibility standards for web developers to keep in mind and solutions for the elderly to overcome most of the accessibility problems. This is not an end point of our project, we would keep promoting the importance of web accessibility.