Fed CASIC 2014

A Questionnaire Guide to Web Instrument Accessibility

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Motivations for the Session

- Given in September 2013 at a Blaise Conference
  - http://www.blaiseusers.org/2013/papers/8b.pdf
- Describe Blaise IS Accessibility Features
- Give accessibility information to Blaise 5 developers

- Motivate more work on this topic
- Compare visual and aural screen design
- Make one design work for sighted and blind users
- This is a usability presentation in many respects

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Acknowledgements

▸ Tim Carati, The Blaise Team -> New Style Sheets

▸ Mathematica Policy Research -> Examples

▸ University of Michigan -> Examples

▸ Jim O'Reilly, Westat -> Persistent Accessibility Work

▸ Larry Malakhoff, Census -> Information on JAWS, accessibility, and screen readers

▸ Linda Bandeh (MPR), Karen Brenner (Westat), Tim Carati (Statistics Netherlands), Larry Malakhoff (Census), Esme Pierzchala (daughter) -> Reviews

▸ All my work was funded by Statistics Netherlands

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Two Example Blaise IS Datamodels

‣ Forms

  ‣ Single item screens

  ‣ Two or more related items on a screen

‣ Grids

  ‣ Tabular screens

‣ Both are now examples in the Blaise 4 distribution.

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Method

‣ Evaluate visual designs and see how they translate into an aural environment

   ‣ Use Mathematica Policy Research **Visual** Web standards

   ‣ Use real web-survey screens with design challenges

   ‣ No human subjects were harmed, or even **tested** in the conduct of this research!
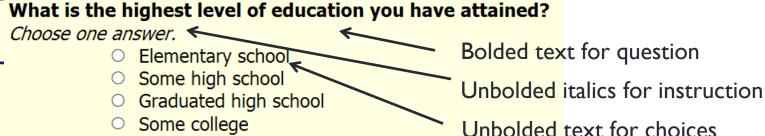
‣ Conclusions

   ‣ Visual design standards do not translate

   ‣ You can usually substitute aural standards

   ‣ Sometimes you might redesign the screen

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‣

Highest Education Level

What is the highest level of education you have attained?
Choose one answer.
- ○ Elementary school
- ○ Some high school
- ○ Graduated high school
- ○ Some college
- ○ Graduated college
- ○ Some graduate school
- ○ Masters or higher degree

Bolded text for question

Unbolded italics for instruction

Unbolded text for choices

Plus font, font size, indentation

"What is the highest level of education you have attained? Choose one answer. Elementary school radio button not checked. To change the selection press up or down arrow."
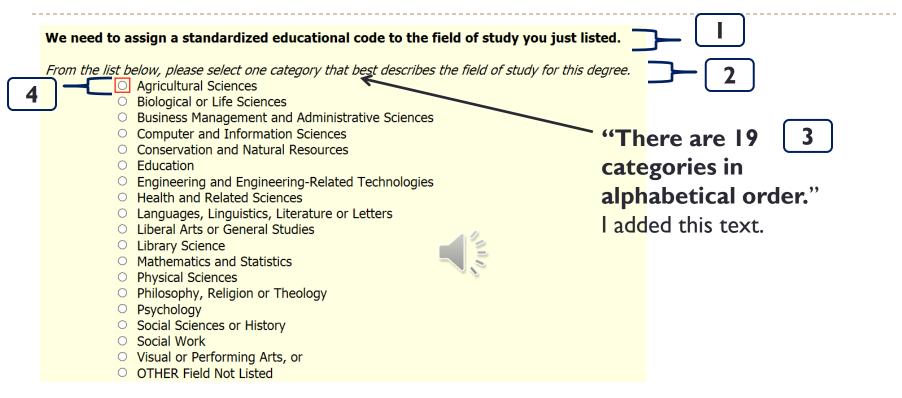
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Blaise IS and JAWS Demonstrations

‣ The next 4 screens give examples of how the screen reader works for selected survey screens.
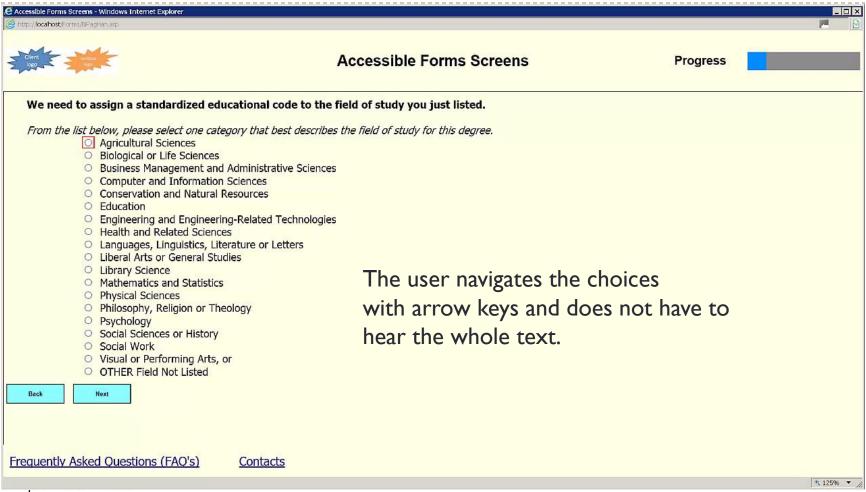
Education Code: First Part

We need to assign a standardized educational code to the field of study you just listed.

1

From the list below, please select one category that best describes the field of study for this degree.

2

4

- ○ Agricultural Sciences
- ○ Biological or Life Sciences
- ○ Business Management and Administrative Sciences
- ○ Computer and Information Sciences
- ○ Conservation and Natural Resources
- ○ Education
- ○ Engineering and Engineering-Related Technologies
- ○ Health and Related Sciences
- ○ Languages, Linguistics, Literature or Letters
- ○ Liberal Arts or General Studies
- ○ Library Science
- ○ Mathematics and Statistics
- ○ Physical Sciences
- ○ Philosophy, Religion or Theology
- ○ Psychology
- ○ Social Sciences or History
- ○ Social Work
- ○ Visual or Performing Arts, or
- ○ OTHER Field Not Listed

3

"There are 19 categories in alphabetical order."
I added this text.

"...radio button not checked. To change the selection press up or down arrow." JAWS added this text.

5

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Education Code: Second Part

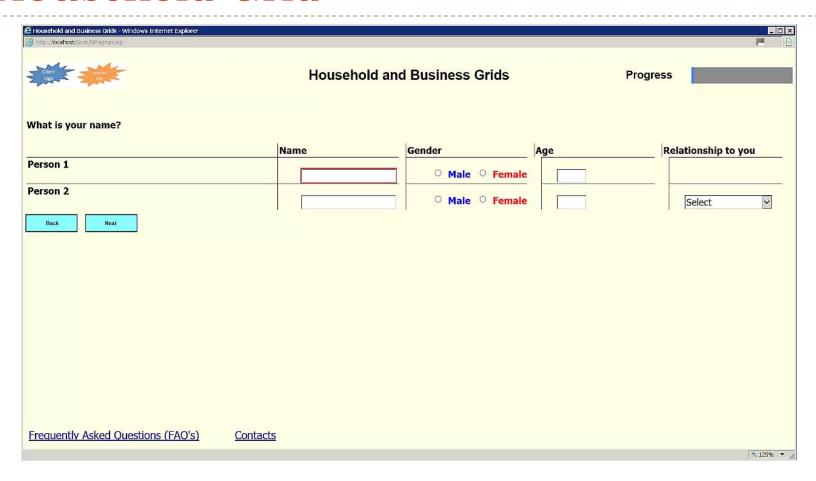The user navigates the choices with arrow keys and does not have to hear the whole text.

Type Name

Household Grid

Screen Redesign or Modifications

▸ The next 4 screens give examples of some adjustments you might make.

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Redesigned Tabular Screen

This page asks you about your children's ages.
There are 5 age categories. Enter the number of children you have in each age category.
If there are no children in a category, please enter 0.

Redesigned screen

How many children who live with you as part of your family are . . .

Children under age 2

Children aged 2 to 5

Children aged 6 to 11

Children aged 12 to 18

Children aged 19 or older

D5. How many of these children were living with you as part of your family were...

If no children in a category, enter '0'.

Under age 2

Aged 2-5

Aged 6-11

Original screen

Aged 12-18

Aged 19 or older

Visual and Aural Juxtaposition

"There are 2 questions on this screen."

The first question asks about the TOTAL amount you have borrowed to finance undergraduate degrees you completed before October 1, 2010, and the second asks how much you still owed as of October 1, 2010.

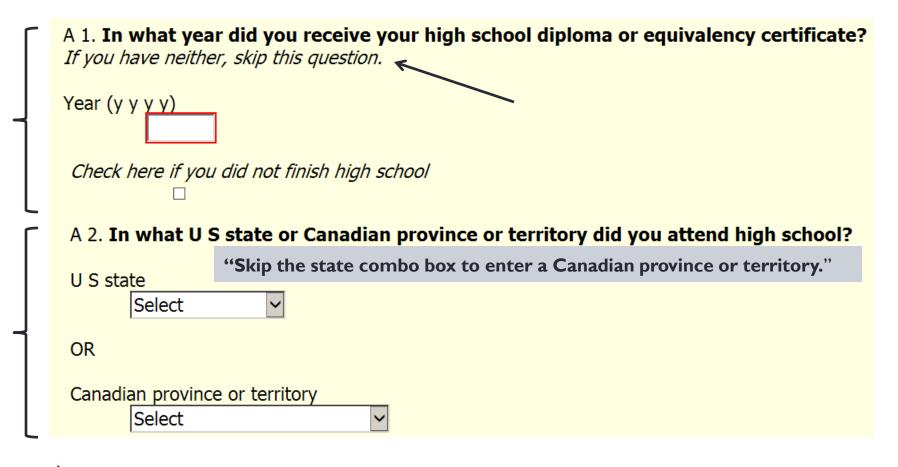"What is the total amount you borrowed?"

Total Amount Borrowed

- ○ Did not earn a degree at this level
- ○ None
- ○ $1 - $5,000
- ○ $5,001 - $10,000
- ○ $10,001 - $15,000
- ○ $15,001 - $20,000
- ○ $20,001 - $25,000
- ○ $25,001 - $30,000
- ○ $30,001 - $35,000
- ○ $35,000 or more

Amount Still Owed as of October 1, 2010

- ○ Did not earn a degree at this level
- ○ None
- ○ $1 - $5,000
- ○ $5,001 - $10,000
- ○ $10,001 - $15,000
- ○ $15,001 - $20,000
- ○ $20,001 - $25,000
- ○ $25,001 - $30,000
- ○ $30,001 - $35,000
- ○ $35,000 or more

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Answer one Question or the Other

A 1. **In what year did you receive your high school diploma or equivalency certificate?**
If you have neither, skip this question.

Year (y y y y)

Check here if you did not finish high school
☐

A 2. **In what U S state or Canadian province or territory did you attend high school?**

"Skip the state combo box to enter a Canadian province or territory."

U S state
Select ▼

OR

Canadian province or territory
Select ▼

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Additional Instructions

Please state how the accident happened.

You can type up to several paragraphs.   "Press the Tab key to leave the question."

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Summary

- Specify web questionnaires with sighted and disabled people in mind.
  - Leave more time for design, testing, and iteration
  - Test under realistic conditions

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Video Links

‣ There are 4 video links to the 2 questionnaires.

> ‣ These are to the MMPSS ScreenCast site.
>
> ‣ http://www.screencast.com/t/XAe79Ih0fj
>
> ‣ http://www.screencast.com/t/LZ8MCLGROJav
>
> ‣ http://www.screencast.com/t/S4DghOUgx
>
> ‣ http://www.screencast.com/t/Up7vJu5sPnz

‣ One day you may have to search for these on a Statistics Netherlands site.

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▶

The End

- Questions and communications:
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