DIAGRAM Center Reading Technology Survey

The DIAGRAM Center Reading Technology Survey, an online survey conducted during February 2012, seems to have revealed some clear trends in how people who are blind and visually impaired obtain and access reading materials.

With only ten questions, the results of the survey can be quickly reviewed and the full results attached in two versions, an HTML file which is accessible for screen readers and in this PDF (provided by Survey Gizmo) that is not accessible. In the HTML version, all of the data are presented in tables.

While the number of respondents was relatively high for research in low-incidence disability (230+/-), the demographic data reveal that most respondents were from a cohort that does not necessarily represent the majority of blind or visually impaired readers.

Most of the respondents were blind (59.4%) and employed, retired or in school with only 12.1% self-identifying as unemployed. In addition, respondents tended to be computer users who accessed electronic files with screen-readers, screen magnifiers or refreshable braille with only 11.7% reporting that they do not use assistive technology.

Add to this the fact that this was an online survey that was announced via email and social media, it is perhaps not surprising that our cohort was largely employed and technically savvy.

However, despite the similarities of the respondents, it was nonetheless striking that their responses were clearly skewed toward certain products and agencies.

In every category of reading material (news and information, pleasure, work, and educational), the same five reading technologies dominated the responses. Screen readers (such as JAWS, VoiceOver, and NVDA) were reported as the most used in every category. After screen readers, came Library of Congress players, Apple products, Kurzweil products and Victor products in different orders of preference depending on the type of reading material.

More varied responses came from the question of where respondents obtained reading materials. If we combine the responses for

"sometimes" and "often", respondents report obtaining reading materials from various organizations in the following order:
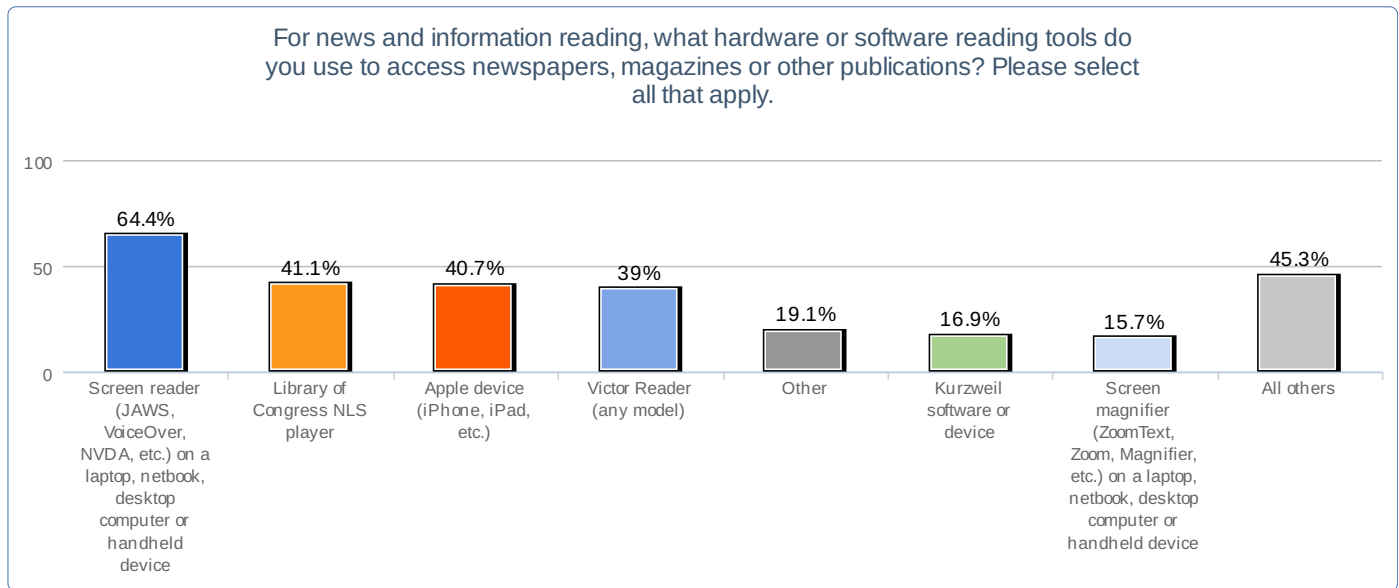
1. National Library Service for the Blind and Physically Handicapped 80.5%
2. Mainstream news and information Web sites (New York Times, CNN, etc.) 68.9%
3. Bookshare 56.8%
4. Learning Ally (formerly RFB&D) 40.9%
5. American Printing House for the Blind 38.3%
6. Public library 38.3%
7. Audible.com 31.2%
8. Amazon 30.5%
9. Disability student services 19.3%
10. School library 19.3%

It should be noted that since few of the respondents were students, it's logical that DSS offices and school libraries were seldom used. Similarly, Bookshare's high ranking may have been skewed since, as the lead organization in DIAGRAM, Bookshare helped to disseminate the online survey and thus more Bookshare members may have answered than if the survey was more broadly advertised.

Certainly, any research should be repeated before it's considered meaningful and this survey, with its somewhat surprising results, is only a first step in discovering what tools and technologies people who are blind and visually impaired are actually using. Such data are valuable since with limited resources dedicated to assistive technology, support should be focused on those devices and reading tools that are most used by the people who rely on them for access to education, employment and enjoyment.

Summary Report - Mar 12, 2012
Survey: DIAGRAM Reading-Technology Survey

For news and information reading, what hardware or software reading tools do
you use to access newspapers, magazines or other publications? Please select
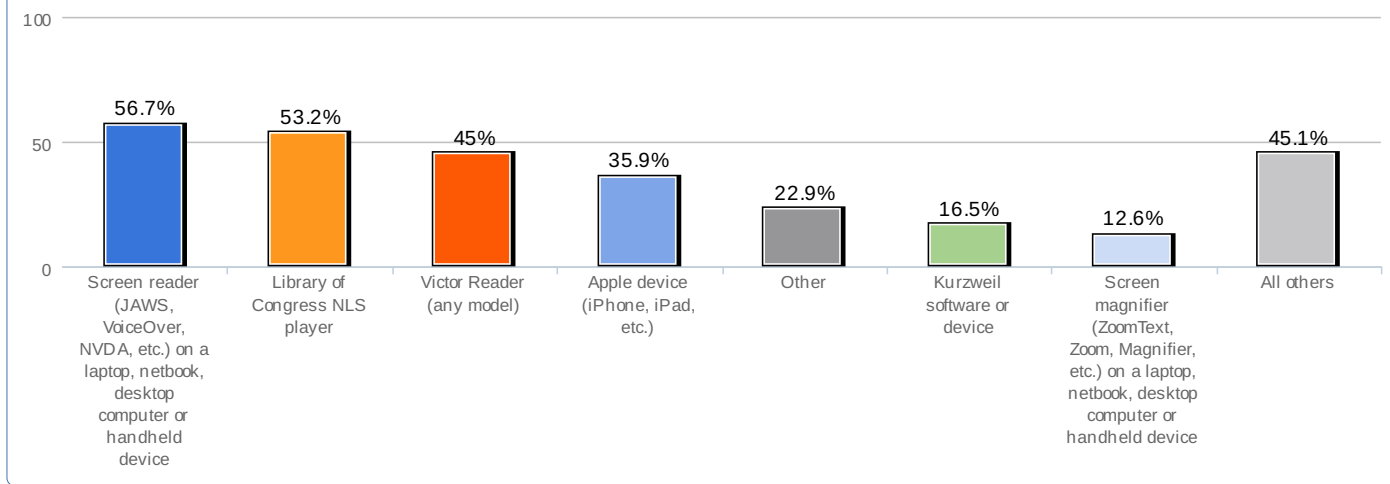all that apply.

1. For news and information reading, what hardware or software reading tools do you use to access newspapers, magazines or other publications? Please select all that apply.

Value	Count	Percent %
Screen reader (JAWS, VoiceOver, NVDA, etc.) on a laptop, netbook, desktop computer or handheld device	152	64.4%
Library of Congress NLS player	97	41.1%
Apple device (iPhone, iPad, etc.)	96	40.7%
Victor Reader (any model)	92	39%
Other	45	19.1%
Kurzweil software or device	40	16.9%
Screen magnifier (ZoomText, Zoom, Magnifier, etc.) on a laptop, netbook, desktop computer or handheld device	37	15.7%
I do not obtain news and information via portable reading devices.	26	11%
Android device (phone, tablet, etc.)	18	7.6%
BookSense	17	7.2%
Kindle (any model)	15	6.4%
BookPort	12	5.1%
Plextalk (any model)	10	4.2%
Nook (any model)	3	1.3%
ReadHear	3	1.3%
EasyReader	2	0.8%
Milestone	1	0.4%

Statistics	
Total Responses	236

For pleasure reading, what hardware or software reading tools do you use to access books and other publications? Please select all that apply.

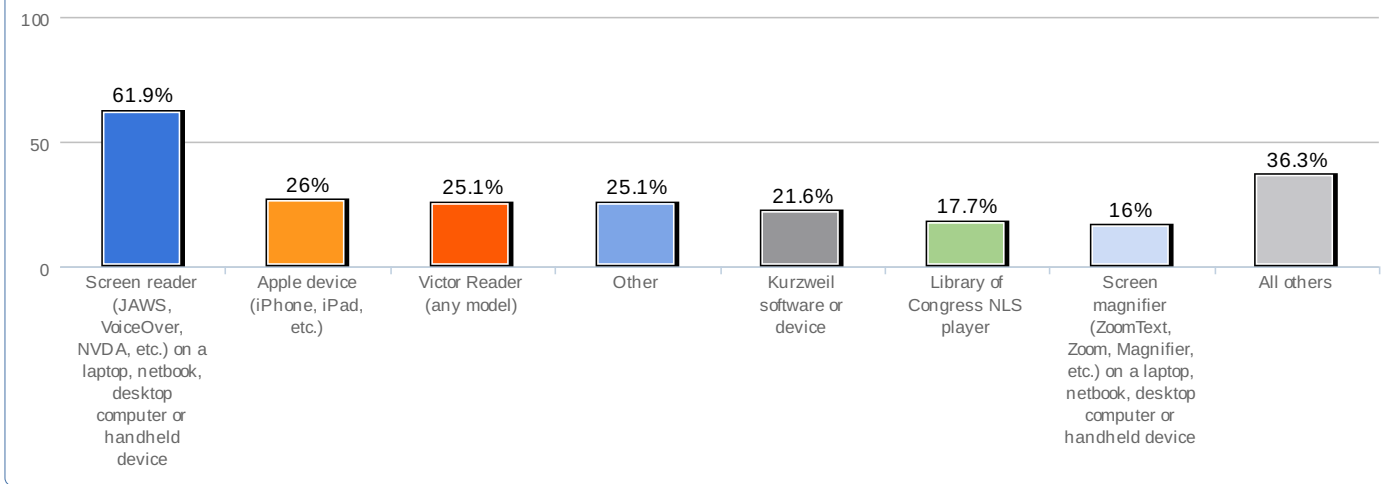| Label	Percent
Screen reader (JAWS, VoiceOver, NVDA, etc.) on a laptop, netbook, desktop computer or handheld device	56.7%
Library of Congress NLS player	53.2%
Victor Reader (any model)	45%
Apple device (iPhone, iPad, etc.)	35.9%
Other	22.9%
Kurzweil software or device	16.5%
Screen magnifier (ZoomText, Zoom, Magnifier, etc.) on a laptop, netbook, desktop computer or handheld device	12.6%
All others	45.1%

2. For pleasure reading, what hardware or software reading tools do you use to access books and other publications? Please select all that apply.

Value	Count	Percent %
Screen reader (JAWS, VoiceOver, NVDA, etc.) on a laptop, netbook, desktop computer or handheld device	131	56.7%
Library of Congress NLS player	123	53.2%
Victor Reader (any model)	104	45%
Apple device (iPhone, iPad, etc.)	83	35.9%
Other	53	22.9%
Kurzweil software or device	38	16.5%
Screen magnifier (ZoomText, Zoom, Magnifier, etc.) on a laptop, netbook, desktop computer or handheld device	29	12.6%
Kindle (any model)	20	8.7%
BookSense	19	8.2%
Plextalk (any model)	14	6.1%
I do not obtain pleasure-reading materials via portable reading devices.	13	5.6%
BookPort	13	5.6%
Android device (phone, tablet, etc.)	11	4.8%
Nook (any model)	5	2.2%
Milestone	4	1.7%
ReadHear	3	1.3%
EasyReader	2	0.9%

Statistics	
Total Responses	231

For work reading, what hardware or software reading tools do you use to access books and other publications? Please select all that apply.
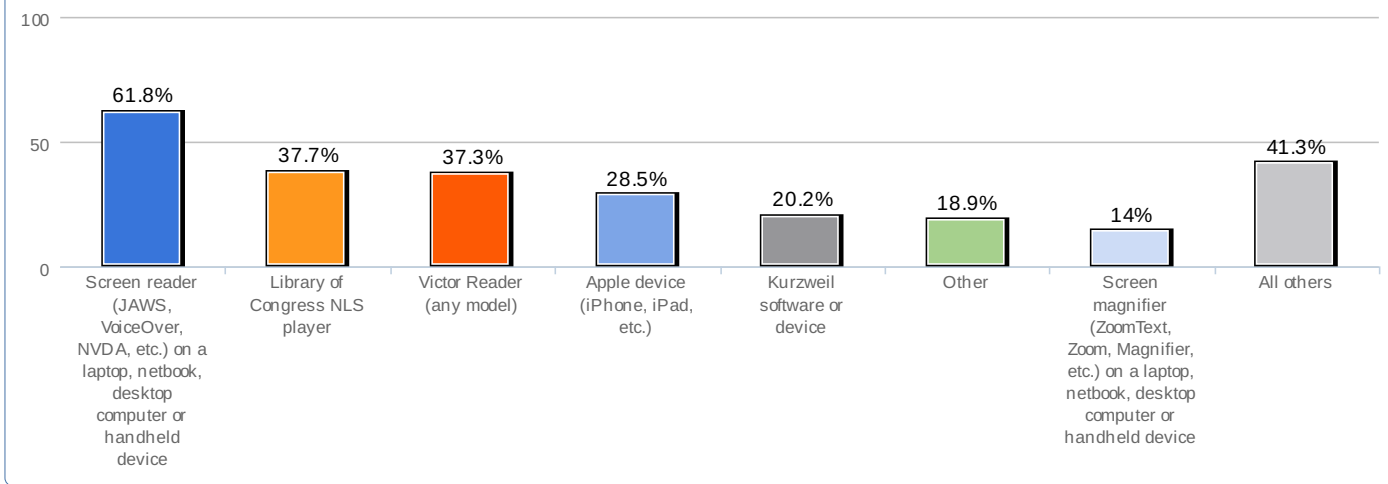
3. For work reading, what hardware or software reading tools do you use to access books and other publications? Please select all that apply.

Value	Count	Percent %
Screen reader (JAWS, VoiceOver, NVDA, etc.) on a laptop, netbook, desktop computer or handheld device	143	61.9%
Apple device (iPhone, iPad, etc.)	60	26%
Victor Reader (any model)	58	25.1%
Other	58	25.1%
Kurzweil software or device	50	21.6%
Library of Congress NLS player	41	17.7%
Screen magnifier (ZoomText, Zoom, Magnifier, etc.) on a laptop, netbook, desktop computer or handheld device	37	16%
I do not obtain work-reading materials via portable reading devices.	33	14.3%
Kindle (any model)	10	4.3%
Plextalk (any model)	10	4.3%
BookSense	9	3.9%
BookPort	9	3.9%
Android device (phone, tablet, etc.)	5	2.2%
EasyReader	4	1.7%
Milestone	2	0.9%
ReadHear	1	0.4%
Nook (any model)	1	0.4%

Statistics	
Total Responses	231

For educational reading, what hardware or software reading tools do you use to access books and other publications? Please select all that apply.

4. For educational reading, what hardware or software reading tools do you use to access books and other publications? Please select all that apply.
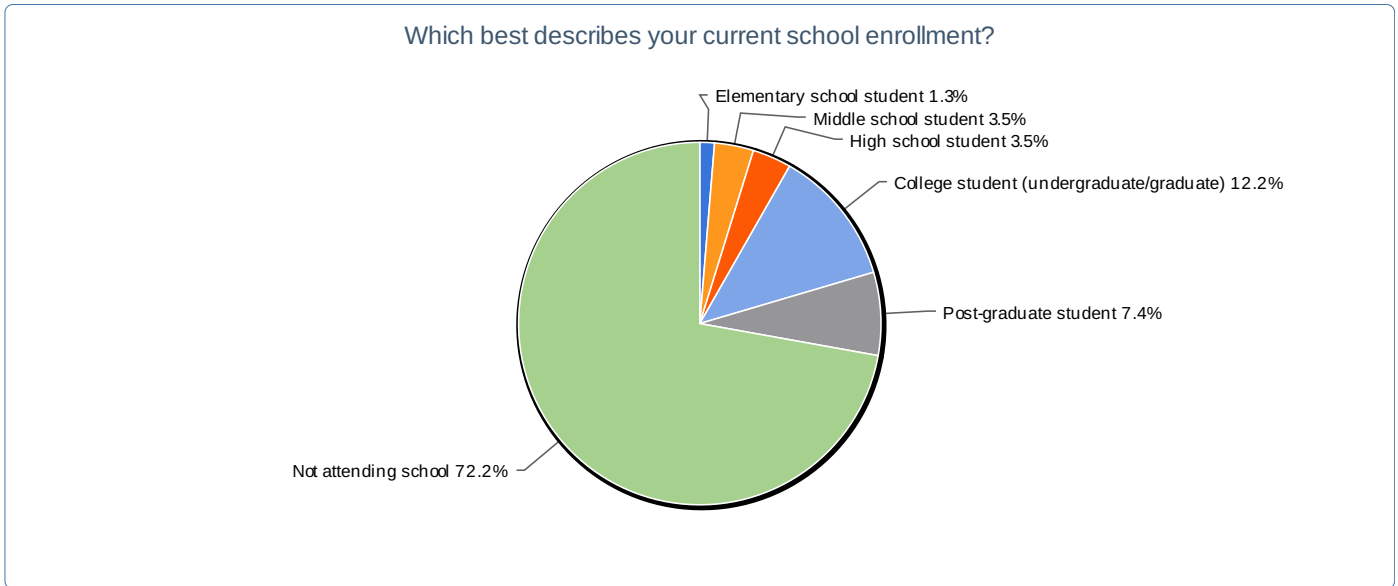
Value	Count	Percent %
Screen reader (JAWS, VoiceOver, NVDA, etc.) on a laptop, netbook, desktop computer or handheld device	141	61.8%
Library of Congress NLS player	86	37.7%
Victor Reader (any model)	85	37.3%
Apple device (iPhone, iPad, etc.)	65	28.5%
Kurzweil software or device	46	20.2%
Other	43	18.9%
Screen magnifier (ZoomText, Zoom, Magnifier, etc.) on a laptop, netbook, desktop computer or handheld device	32	14%
I do not obtain educational materials via portable reading devices.	30	13.2%
BookSense	14	6.1%
BookPort	12	5.3%
Kindle (any model)	12	5.3%
Plextalk (any model)	11	4.8%
ReadHear	6	2.6%
Android device (phone, tablet, etc.)	5	2.2%
Milestone	2	0.9%
EasyReader	2	0.9%
Nook (any model)	0	0%

Statistics	
Total Responses	228

5. Where do you access most of your reading material? Three responses are offered in the drop-down menus below: rarely or never, sometimes or often. Please select one response for each choice.

	rarely or never	sometimes	often	Responses
Amazon	69.5% 137	21.8% 43	8.6% 17	197
American Printing House for the Blind	61.7% 121	28.1% 55	10.2% 20	196
Audible.com	68.8% 139	17.8% 36	13.4% 27	202
Bookshare	43.1% 91	24.6% 52	32.2% 68	211
Learning Ally (formerly RFB&D)	58.9% 123	28.2% 59	12.9% 27	209

National Library Service for the Blind and Physically Handicapped	**19.5%** 42	**14.0%** 30	**66.5%** 143	**215**
Mainstream news and information Web sites (New York Times, CNN, etc.)	**31.2%** 67	**34.0%** 73	**34.9%** 75	**215**
Disability student services	**80.7%** 163	**9.9%** 20	**9.4%** 19	**202**
School library	**80.7%** 163	**13.4%** 27	**5.9%** 12	**202**
Public library	**61.7%** 132	**29.0%** 62	**9.3%** 20	**214**

Which best describes your current school enrollment?

Elementary school student 1.3%
Middle school student 3.5%
High school student 3.5%
College student (undergraduate/graduate) 12.2%
Post-graduate student 7.4%
Not attending school 72.2%

6. Which best describes your current school enrollment?

Value	Count	Percent %
Elementary school student	3	1.3%
Middle school student	8	3.5%
High school student	8	3.5%
College student (undergraduate/graduate)	28	12.2%
Post-graduate student	17	7.4%
Not attending school	166	72.2%

Statistics	
Total Responses	230

Which best describes your current employment?

Retired 23.3%
Employed 49.1%
Unemployed but in school 15.5%
Unemployed 12.1%
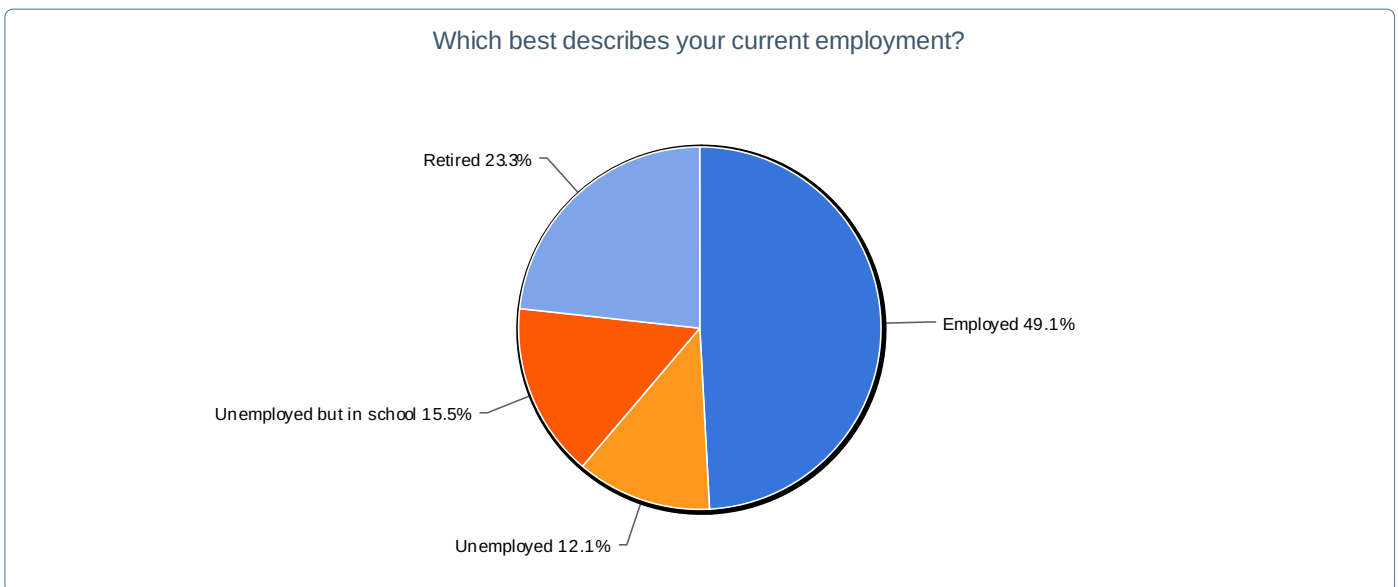
7. Which best describes your current employment?

Value	Count	Percent %
Employed	114	49.1%
Unemployed	28	12.1%
Unemployed but in school	36	15.5%
Retired	54	23.3%

Statistics	
Total Responses	232

What best describes your level of vision?

Sighted 7.3%
Sighted, responding on behalf of a person with a print disability 3.8%
Other print disability 2.6%
Low vision 26.9%
Blind 59.4%
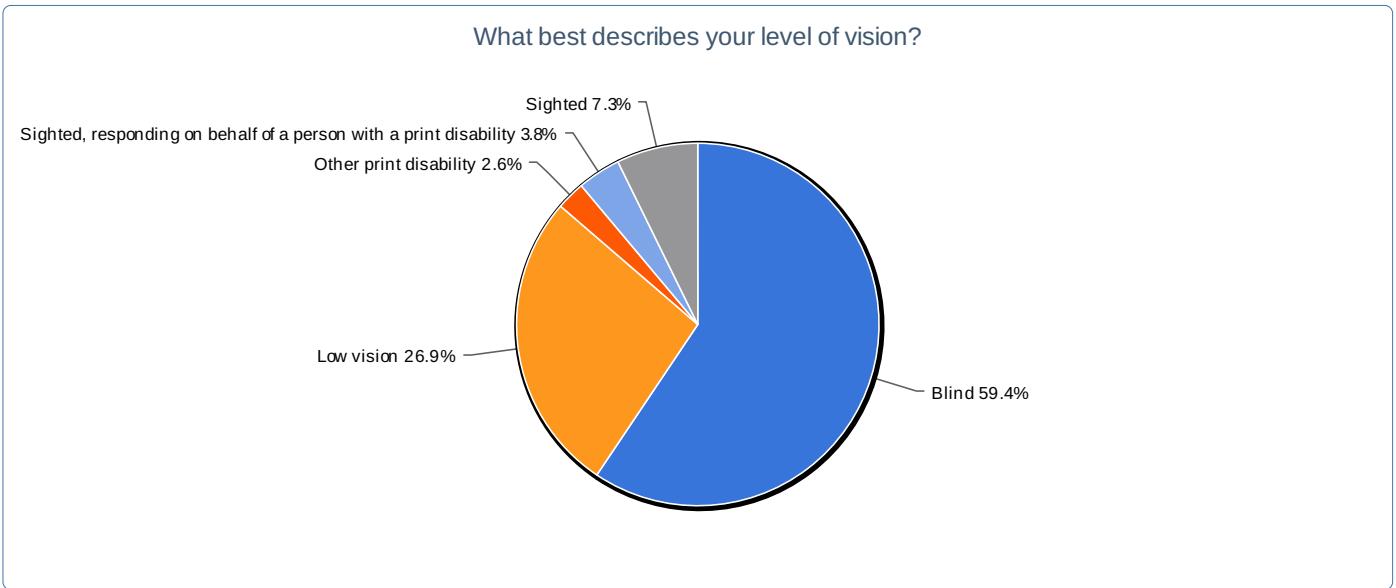
8. What best describes your level of vision?

Value	Count	Percent %
Blind	139	59.4%
Low vision	63	26.9%
Other print disability	6	2.6%
Sighted, responding on behalf of a person with a print disability	9	3.8%
Sighted	17	7.3%

Statistics	
Total Responses	234

What assistive technology, if any, do you primarily use to access electronic reading materials?

None 11.7%
Screen magnifier 13.0%
Refreshable Braille display 14.7%
Screen reader 60.6%
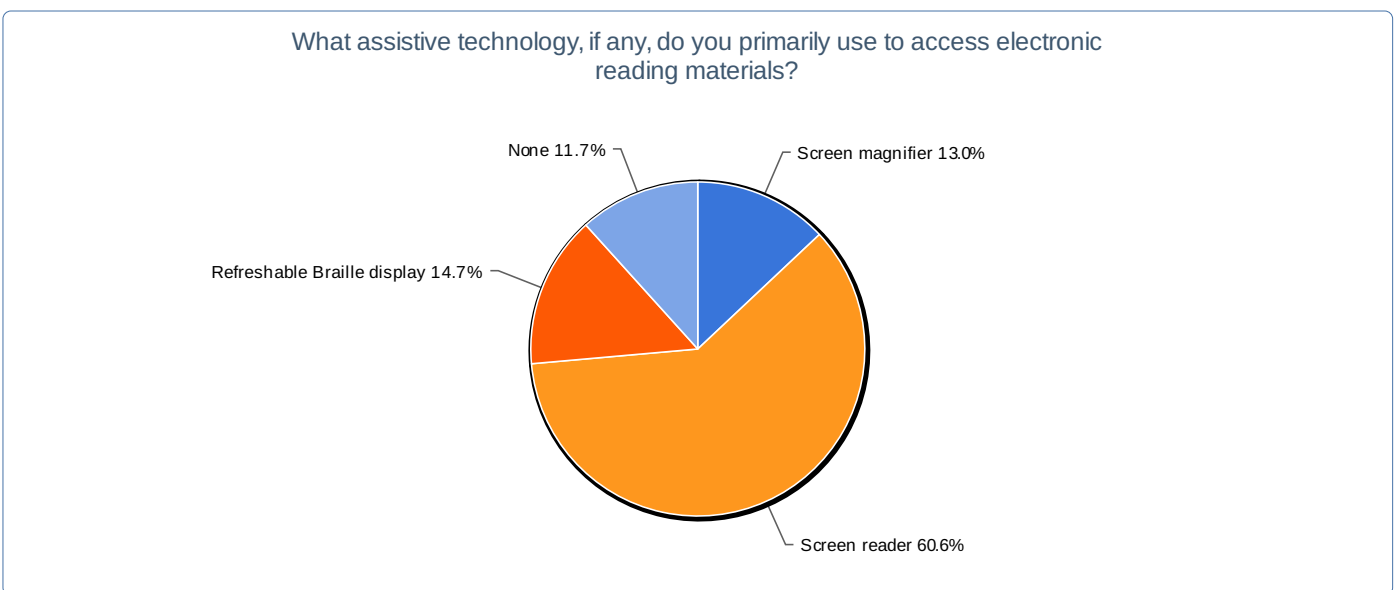
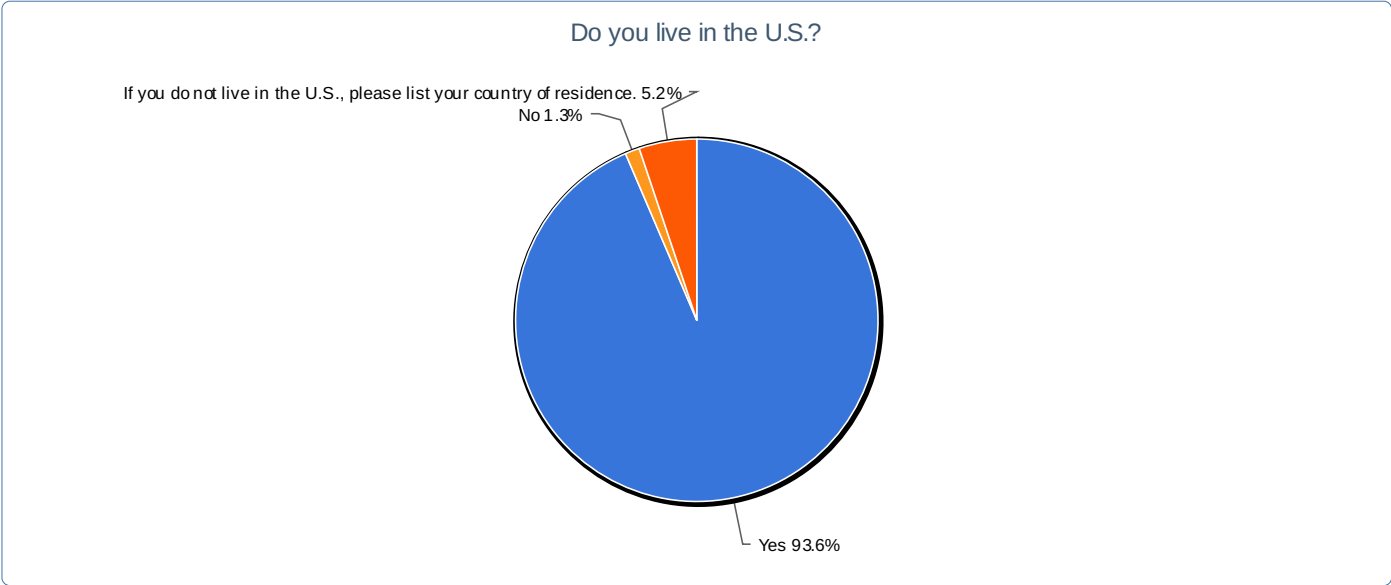## 9. What assistive technology, if any, do you primarily use to access electronic reading materials?

Value	Count	Percent %
Screen magnifier	30	13%
Screen reader	140	60.6%

Statistics	
Total Responses	231

Refreshable Braille display	34	14.7%
None	27	11.7%

Do you live in the U.S.?

If you do not live in the U.S., please list your country of residence. 5.2%
No 1.3%
Yes 93.6%

10. Do you live in the U.S.?

Value	Count	Percent %
Yes	218	93.6%
No	3	1.3%
If you do not live in the U.S., please list your country of residence.	12	5.2%

Statistics	
Total Responses	233

URL Variable: crc

Count	Response

URL Variable: id

Count	Response

URL Variable: snc

Count	Response
1	1328813754_4f3416baea6b53.61236830