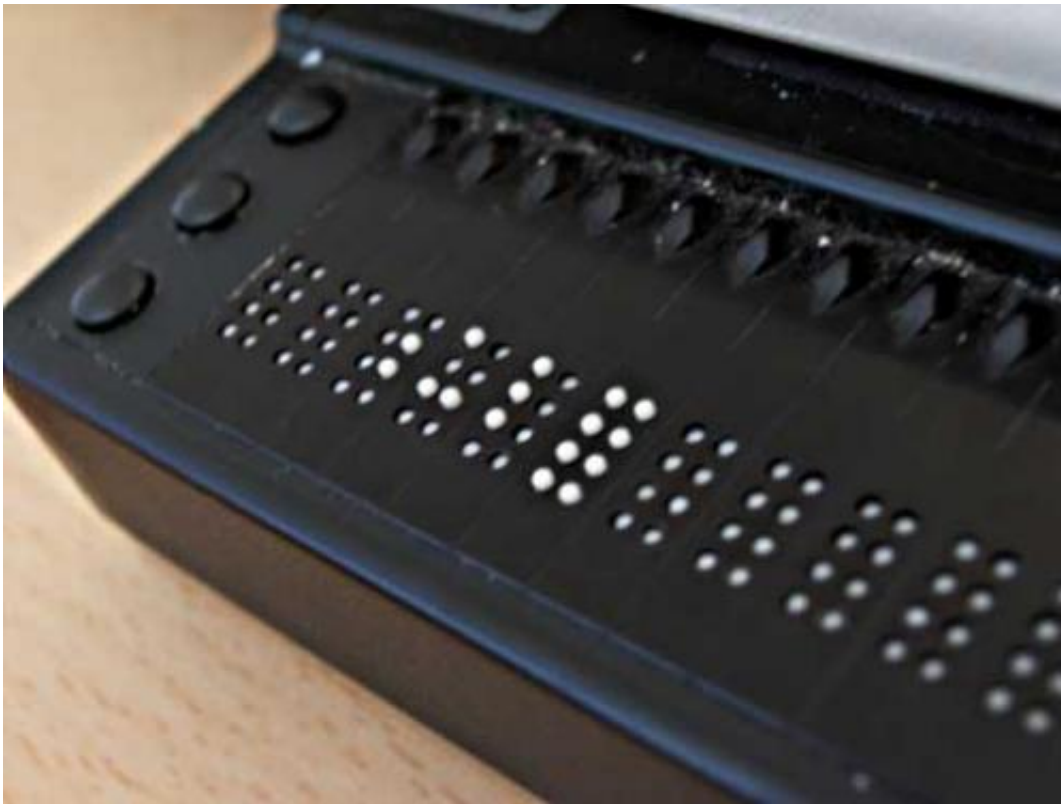


Technology changing lives for visually impaired people in developing countries

April 4 2014, by Mandira Banerjee



Braille display. Image credit: Wikimedia Commons

(Phys.org) —He was planning to be a lawyer because he didn't think visually impaired people like him could do high-tech jobs in India. But after discovering special technology that allows him to use computers, he changed his mind and now wants to be a software engineer.

"I became crazy about computers. Now I want to do something with computers only," said the man, one of 176 people surveyed in India, Peru and Jordan about how their lives were changed by [technology](#) that enables blind people to use computers and other devices.

The study shows that [assistive technology](#)—screen readers and other communication software—can boost the economic and social aspirations of [visually impaired people](#), enabling them to pursue work they once thought was impossible. The technology also makes them less marginalized in low- and middle-income countries, where they are often stuck at home or limited to low-skilled jobs.

"As one of our interviewees said, 'Technology may not do all the work, but it does create small wonders,'" said the study's author, Joyojeet Pal, an assistant professor in the School of Information at the University of Michigan.

Many of the respondents said they didn't know that a blind person could use a computer until early adulthood. Several only found out about assistive technology when they were applying for jobs either directly or through resource centers.

Some of the most interesting comments from those interviewed included:

- From Peru: "I learned how to use Windows, the Internet, I learned how to use Word and all that...For me, that was great. There was nothing else in the world. I had won the world with that."
- From Jordan: "Without (assistive technology), persons with a disability will feel subhuman. At least when dealing with the computer...you do not feel that you are blind."
- From India: "When I sit in the bank and work, customers who

come to the bank realize that the (visually impaired) can work on the system seeing me. They go and spread this information in their neighborhood."

Pal believes that smart phones and other mobile devices will likely play an increasingly key role for visually impaired people in low- and middle-income countries where assistive technology for personal computers is limited due to cost and other factors. This issue was the focus of another study in Bangalore, India, by Pal and co-author Meera Lakshmanan, an independent scholar.

"Buying a mobile device with assistive technology is central for a woman with vision impairment to being independent," Pal said.

The study found that women often paid \$50-\$60 more than men for cell phones with assistive technology. One possible explanation for this was that men were far more likely to buy used phones. They had greater physical mobility, larger social networks and better access to markets than women. More women had to buy higher-priced new handsets.

According to the study, there is an overwhelming preference for Nokia phones among the [visually impaired](#).

"The reason for this unusually high number of users was because one of the assistive technology—Nuance Talks screen reader—runs on the Nokia-based phone," Pal said.

For the next step, Pal's research will look at the effect of assistive technology in many Asian and African countries, such as South Korea, Malawi and South Africa.

Pal's study is published in ICTD '13: Proceedings of the Sixth International Conference on Information and Communication

Technologies and Development.

Provided by University of Michigan

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