Summary Report from DAISY Asia Pacific countries Survey 2024

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# Introduction

Globally, around 16% of the world’s population is estimated to have a disability which is around 1.3 billion people. Of these, 750 million people live in the Asia Pacific region.[[1]](#footnote-1) According to the World Health Organisation, about 253 million people are visually impaired and around 43 million people are living with blindness.[[2]](#footnote-2)  Nearly two-thirds of those with moderate-to-severe vision impairment live in East, South and Central Asia, even though the APAC region only has 51%  of the world’s population.[[3]](https://mail.google.com/mail/u/0/%22%20%5Cl%20%22m_2221906085752144389__ftn3%22%20%5Co%20%22)[[3]](#footnote-3) The situation in the region is compounded by the fact that it has the fastest aging population with an estimated 1.3 billion people projected to be over 60 by 2050 and has over 227 million people living with Type 2 diabetes which is a further risk factor for vision loss.

Added to this, there are a large number of people with other disabilities and conditions such as a visual, perceptual, physical, cognitive, developmental, or learning disability that prevents them from being able to read standard printed material such as books, newspapers, etc.  In such cases, they need to access the content in an alternative manner, often using assistive technology, such as Braille, large print, audio formats, adapted reading displays, accessible e-books or a combination of multiple formats.

## The problem

Access to books and knowledge is critical to gaining education, employment and a good quality of life. Persons with print disabilities have traditionally been excluded from accessing cultural materials.

Despite advancements in technology, publishing and internet related services, less than 1% books which get published are available for persons with print disabilities. Persons with print disabilities face several challenges in accessing information. One major issue is the limited availability of accessible formats such as large print, audio, Braille, or electronic text compatible with screen readers. Even when these formats exist, they may not be readily available. This has resulted in a book famine.

Technological challenges, including keeping up with rapid advancements in assistive technologies, availability of affordable technologies in local languages  and the digital divide, also limit access to information and resources.

# Purpose of this report

The DAISY Consortium seeks to enhance access to books and critical technologies for persons with print disabilities in this region. As part of this effort,  a short survey was carried out to assess the gaps in the availability of accessible content and technologies.

The survey presents results from 15 countries in the Asia Pacific region. Respondents are representatives of organisations serving persons with disabilities in their respective countries. We trust that this report will help in identifying regional and country level gaps and inform strategies to address them going forward.

# Survey Results

## Coverage

We received responses from 15 countries in this region:

* Central Asia: Kazakhstan, Kyrgyzstan,
* East Asia: Mongolia
* South Asia: Afghanistan, Bangladesh, Bhutan, India, Nepal, Sri Lanka
* South east Asia: Indonesia, Philippines, Vietnam, Malaysia
* West Asia: Republic of Armenia , Turkiye

The responses are from countries whose populations comprise 35% of the population total of low- and middle-income countries.

Out of these 15 countries, 7 countries have ratified the Marrakesh Treaty. Of these 2 countries have also passed national reform whereas the remaining have had partial or no national reform as yet.

In these countries, educational books are published in 33 languages. Out of these Russian and English are European languages, while the remaining are native languages of the surveyed APAC countries.

## Availability of accessible books

The survey asked the respondents to provide their perspective on the availability of books in accessible formats and assistive technology for persons with print disabilities in their countries. The survey covered the usage of technologies for reading and writing across 4 age groups – primary school, secondary school, university and adults.

### Availability of textbooks in accessible formats for students

The availability of books in accessible formats progressively decreased the higher the stage of education in the countries surveyed. In most countries, the availability of textbooks in accessible formats decreased from 60% or fewer in primary/middle school to less than 30% for university students.

* In 53% of the countries (8/15), 60% or fewer textbooks for primary/middle school learners are available in accessible formats.
* In 67% (10/15) of the countries, 60% or fewer textbooks for secondary school learners are available in accessible formats.
* In 80% of the countries(12/15), 30% or fewer textbooks for university learners are available in accessible formats

### Accessible books reaching students

Even when books are available in accessible formats, very few students have access to those books and this also worsened at higher stages of education.

* In 60% of the countries (9/15), 60% or fewer primary/middle school learners received books in the accessible format they need
* In 67% of the countries (10/15), 60% or fewer secondary school learners received books in the accessible format they need
* In 67% of the countries (10/15), 30% or fewer university students got textbooks in the accessible format they need

Table 1 Number of countries where learners across different age groups who receive textbooks in the format they need

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Age Group | Less than 30% | Between 30% to 60% | Between 60% and 99% | 100% |
| Primary / middle school | 6 | 3 | 5 | 1 |
| Secondary / senior school | 4 | 6 | 5 | - |
| University | 10 | 1 | 2 | 1 |

### Availability of books for adults

In 13 out of 15 countries surveyed, only some general literature books are available in accessible formats – this is estimated to be less than 30% books in 7 out of 5 countries and between 30% and 60% in another 6 countries.

Accessible newspapers and magazines are not available for adults with print disabilities in 80% (12/15) of the countries surveyed.

## Assistive technology for students

### Preferred devices for learning

Across all age groups, the smartphone with touchscreen is the most preferred device for school learners in most APAC countries. Dedicated Mp3 players, Specialist DAISY players and Laptop computers are jointly second in preference for primary/middle school learners. However, laptop computers are the most preferred device for university learners in about 80% countries.

Table 2 Number of countries and preferred learning devices across different age groups

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Age groups  | Dedicated MP3 players | Specialist DAISY players | Basic phone with keypad | Smartphone with touch screen | Laptop computer | Refreshable braille display |
| Primary/ Middle school | 6 | 5 | 3 | 8 | 5 | 2 |
| Secondary school learners | 6 | 6 | 5 | 11 | 9 | 4 |
| University Learners | 6 | 6 | 6 | 11 | 12 | 5 |

### Access to devices for learning

Access to at least one of the reading devices is lowest for primary/middle school learners. In 67% countries, less than 40% have access and this reduces to 33% countries for secondary school and university learners.

Table 3 Number of countries and proportion of users with access to at least one of the reading devices by age group

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Age Group | Less than 20% | 20 to 39% | 40 to 59 % | 60 – 79% | Over 80% |
| Primary/ middle school | 6 | 4 | 1 | 4 | - |
| Secondary/ senior school | 1 | 4 | 5 | 3 | 2 |
| University | 3 | 2 | 2 | 3 | 5 |

When looking at the preferred devices like a computer or smartphone, the situation is similar. In 67% countries, less than 40% of primary/middle school learners have regular access to a smartphone or a computer. This reduces to 47% for secondary school learners and 27% for university, indicating that regular access to these devices improves with higher stages of education.

Table 4 Number of countries and proportion of users with regular access to a smartphone or computer by age group

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Age Group | Less than 20% | 20 to 39% | 40 to 59 % | 60 – 79% | Over 80% |
| Primary/ middle school | 6 | 4 | 1 | 4 | *-* |
| Secondary/ senior school | 5 | 2 | 4 | - | 4 |
| University | 2 | 2 | 3 | 3 | 5 |

### Preferred Writing method

The most preferred writing method in primary/middle school for learners with print disabilities is Braille, slate writing frame or other Brailler, as reported by 80% countries. For secondary/senior school learners this continues to be the most popular with Human assistance (scribe or writer) and Large print pen and paper also increasing in usage. For university students however, 67% countries reporting the most preferred writing method to be a computer or human assistance (scribe or writer), with Braille slate, writing frame or Brailler and Large print, pen and paper coming second.

Table 5 Number of countries and methods commonly used by students with print disabilities for writing assignments or examinations by age group

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Age group | Computer | Smartphone / tablet | Braille slate, writing frame or brailler | Human assistance (scribe or writer) | Large print, pen and paper |
| Primary/ middle school | 4 | 1 | 12 | 7 | 8 |
| Secondary/ senior school | 5 | 2 | 11 | 10 | 9 |
| University | 10 | 6 | 8 | 10 | 8 |

### Preferred devices for adults

Smartphones with touch screens are the most preferred devices (87% countries), followed by laptop computers (67%) and dedicated MP3 players (60%). Other devices that are used are specialist DAISY players (40%), basic phone with keypad (40%) refreshable Braille displays (33%).

In 60% of the countries surveyed (9/15), 60% or fewer adults have access to at least one of the reading devices. Kyrgyzstan and Mongolia have the least access with less than 20% of adults with print disabilities having access to at least one device. Kazakhstan, Malaysia and Republic of Armenia are among the best with 80-99% having acess,

## Access to online libraries

87% of the countries surveyed i.e. all countries except Afghanistan and Bhutan have a library service located in the country providing accessible books for people with print disabilities.

Among these, Digital audio (e.g. MP3, DAISY format) books are available in all 13 countries. Paper (hard copy, Braille) was the next most popular, being available in12 countries, followed by Digital text (e.g. Word, HTML, EPUB, DAISY text) in 9 countries and audio cassette/CDs which were available in 8 countries.

Of the 13 countries which have access to online libraries, 7 have access to both locally produced and international content, 4 have access to locally produced content and information is not available about the rest. All the

3 of the countries – Bangladesh, India and Philippines have access to Bookshare and the Accessible Books Consortium. One other country – Kazakhstan has signed an agreement with Bookshare but no books have been accessed yet.

## Language support

### Languages in which textbooks are available

In most countries, textbooks are available in local languages. The only exception is Bhutan where textbooks are available in English. In Mongolia, Vietnam and Sri Lanka, textbooks are only available in the local language. In most other countries, textbooks are also available in an additional language – Russian in Kyrgyzstan, Kazakhstan and Armenia and English in the rest.

### Languages supported by assistive technologies

10 out of 15 countries surveyed reported some screen reading support in local languages and 11 reported having Braille translation software support. However software to scan a print book to convert it to digital text, is available less than half of the countries, hindering their ability to increase the amount of digital books available to persons with print disabilities.

Table 6 Number of countries that have local language support across different assistive technologies

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Technologies support in local languages | Screen reading software on computer such as NVDA, JAWS, etc. | Screen reading software on smart phone such as talkback on Android | Braille translation software (e.g., Duxbury or Sao Mai Braille) | Reading digital text on a DAISY player such as E10 | Software to scan a print book to text (OCR such as ABBY FineReader) |
| Available | 10 | 10 | 11 | 5 | 7 |
| Support for some languages | 3 | 2 | 1 | 1 | 3 |

## Changes prioritised by respondents

Respondents were asked what changes would make the biggest improvement for people with print disabilities in their country. The changes, in order of highest to lower preference are:

1. All textbooks available in accessible formats (87%)
2. Awareness and training of accessible reading for end users and educators (80%)
3. Updating production of accessible books using modern techniques and standards (80%)
4. Online library of accessible books (73%)
5. Wider choice of locally published books in accessible formats (73%)
6. Wider availability of devices for reading accessible books (67%)
7. Accessible books from publishers (60%)
8. Availability of internationally published books in accessible formats (53%)
9. Screen reading software in local languages (53%)

# Key Takeaways

**Availability of Accessible Books**

* The availability of books in accessible formats decreases as the level of education increases. In most countries, fewer than 60% of primary/middle school textbooks are available in accessible formats, and this drops to less than 30% for university students
* Even when accessible books are available, very few students have access to them, with the situation worsening at higher education levels
* For adults in 13 out of 15 countries surveyed only some general literature books are available in accessible formats

**Assistive Technology:**

* The most preferred device for learning across all age groups is the smartphone with a touchscreen. Laptops are the most preferred device for university learners in about 80% of the countries
* Access to at least one reading device is lowest for primary/middle school learners, with less than 40% having access in 67% of the countries.
* The most preferred writing method for primary/middle school learners is Braille, while for university students, it is a computer or human assistance.

**Access to Online Libraries:**

* 87% of the countries surveyed have a library service providing accessible books for people with print disabilities
* Digital audio books are available in all 13 countries with library services, followed by paper (hard copy, Braille) in 12 countries, and digital text in 9 countries.
* Three countries (Bangladesh, India, and the Philippines) have access to Bookshare and the Accessible Books Consortium.

**Language Support:**

* In most countries, textbooks are available in local languages, with some countries also offering textbooks in an additional language like Russian or English.
* Screen reading support in local languages is available in 10 out of 15 countries, and Braille translation software support is available in 11 countries.

**Recommended Changes:**

* The top recommended changes include making all textbooks available in accessible formats (87%), raising awareness and training on accessible reading for end users and educators (80%), and updating the production of accessible books using modern techniques and standards (80%)
* Other recommended changes include creating an online library of accessible books (73%) and increasing the availability of devices for reading accessible books
1. <https://www.maketherightreal.net/stories/landmark-jakarta-declaration-endorsed-economic-and-social-commission-asia-and-pacific-its> [↑](#footnote-ref-1)
2. <https://www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment#:~:text=Globally%2C%20at%20least%202.2%20billion,access%20to%20an%20appropriate%20intervention>. [↑](#footnote-ref-2)
3. <https://www.weforum.org/stories/2024/06/combating-vision-loss-in-asia-pacific-a-roadmap-to-2030/#:~:text=Vision%20impairment%20affects%202.2%20billion,safeguard%20sight%20and%20economic%20prosperity>. [↑](#footnote-ref-3)