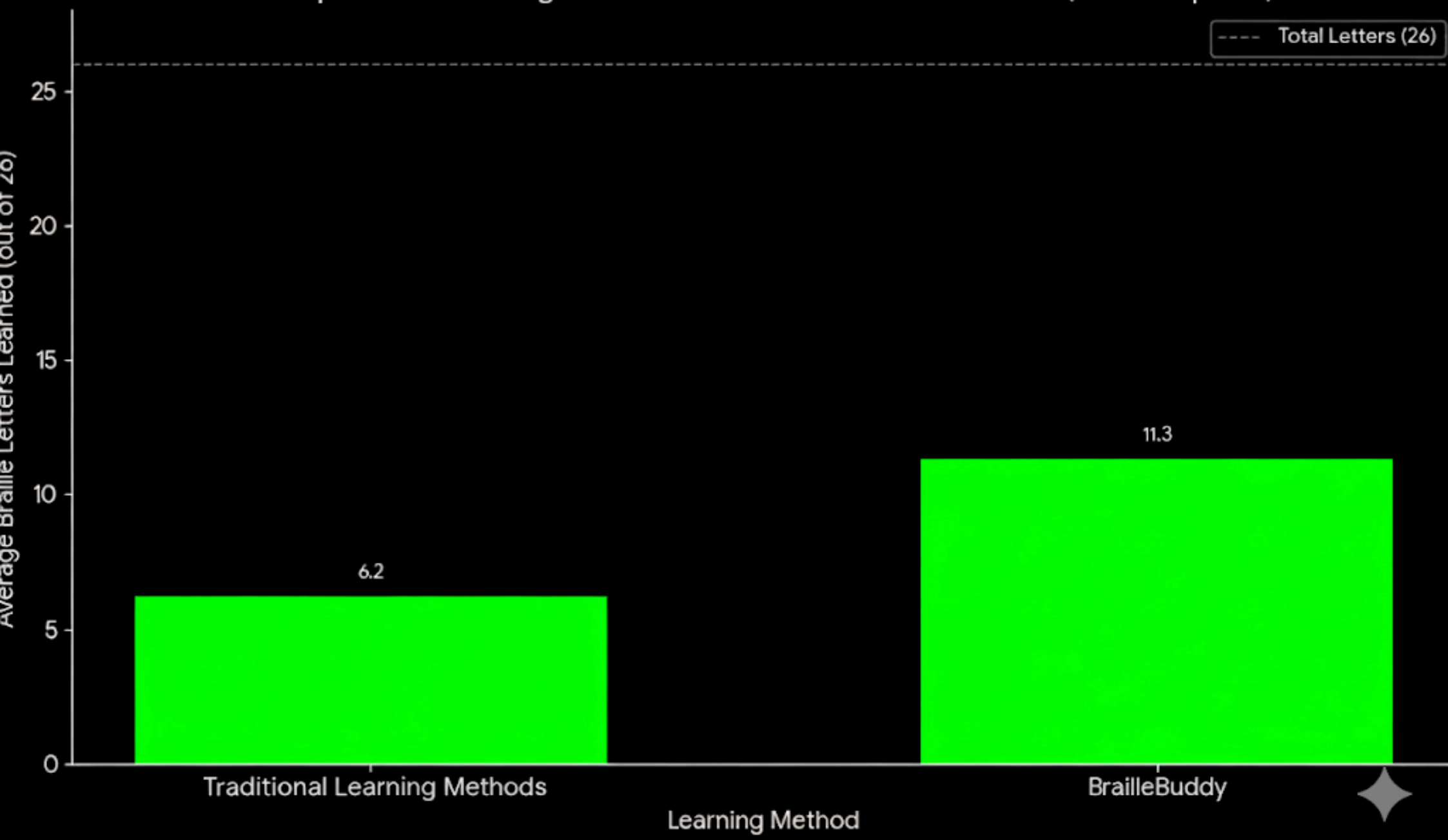
Innovation and Accessibility

Feature	BrailleBuddy	Braille Academy	Brailliac	Taptilo
Tactile Feedback	✅ **Unique: Vibrations simulate dots**	❌ None; Visual-only	❌ None; Visual-only	⚠️ Requires **External Hardware**
Hardware Required	✅ **None**	✅ None	✅ None	❌ Requires External Bluetooth Device
Target Audience	✅ **Primarily Blind/Visually Impaired**	❌ Primarily **Sighted Users**	✅ Blind/Visually Impaired Learners	⚠️ Beginners/Educators
Accessibility Features	✅ **Designed for Accessibility**	❌ **Lacks accessibility features**	❌ Lacks features for blind users	❌ Lacks features for blind users
Text-to-Speech (TTS)	✅ **Compatible/Accessible**	❌ Not Specified	❌ Not Specified	❌ Not Specified

Functionality and Real World Use

Feature	BrailleBuddy	Braille Academy	Brailliac	Taptilo
Learning Approach	✅ **Gamified, Tactile, Interactive**	❌ **Visual-based,** structured	✅ Interactive Lessons/Challenges	✅ Structured Lessons
Learning Depth	✅ **Progressive (Alphabet → Sentences)**	✅ 13 Chapters (Grade 1)	✅ Multiple Modes (Practice, Translation)	✅ Alphabet, Numbers, Words
Customization	✅ **Adjustable Difficulty; Interactive Tests**	❌ **Limited,** fixed content	✅ Customizable keyboard/Practice	✅ Upload custom word lists
Real-World Application	✅ **Utilizes Smartphone's Built-in Features**	❌ Lacks real-world application	❌ Lacks real-world application	⚠️ Requires External Device for Tactile
Scalability	✅ **Can be used on any smartphone**	❌ **Limited;** requires sighted user	❌ Limited; requires specific setup	⚠️ Requires external hardware



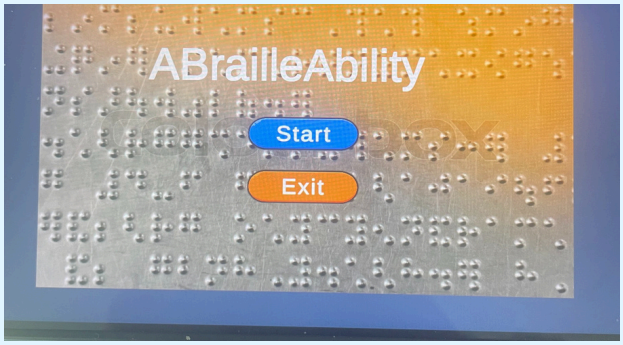
Comparison of Braille Learning Methods: BrailleBuddy vs. Traditional

Feature/Pro	BrailleBuddy	Traditional Learning Methods (Slate/Stylus Perkins, Books)
Affordability (Initial Cost/Materials)	✓	✗
Reliability (Requires Power/Charging)	✓	✓
Compact & Portable Design	✓	✗
Instant Feedback & Correction	✓	✗
Integrated Audio/Multi-Sensory Support	✓	✗
Interactive & Gamified Learning	✓	✗
Develops Digital Literacy Skills	✓	✗

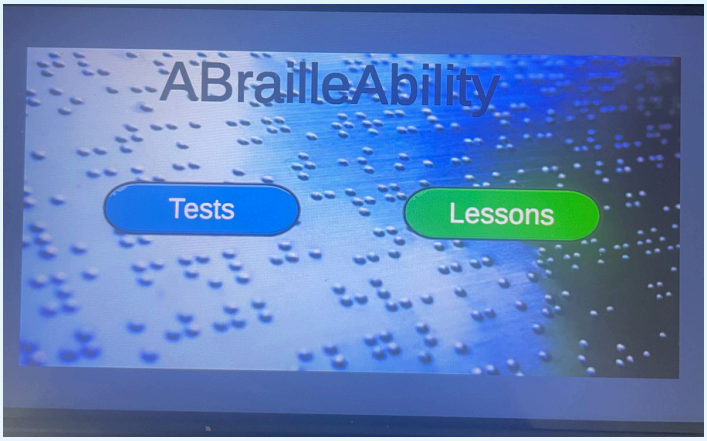
APP FEATURES

Lessons can be taken offline, without WIFI, making it accessible everywhere for everyone.	TTS Reads the instructions out loud with feedback as users interact with the App. Allows Blind patients to easily use BrailleBuddy.	Engages learners through Active recall - testing right after learning the Braille Characters.
Engages learners by allowing them to feel the vibrations when touching a dot - simulates the actual feeling and allows for hands on learning.	App is in High contrast colours, big clear fonts, with a simple and minimal layout for those with Low Vision	BrailleBuddy is a free app that is soon to be launched. Provides a free, fun, hands on learning experience for those looking to learn Braille
Portable and allows you to learn Braille anywhere with just your phone!	App is minimal and simplified, allowing for easy usage.	Self Paced Learning: Users can learn Braille at there own pace and have fun at the same time!
		

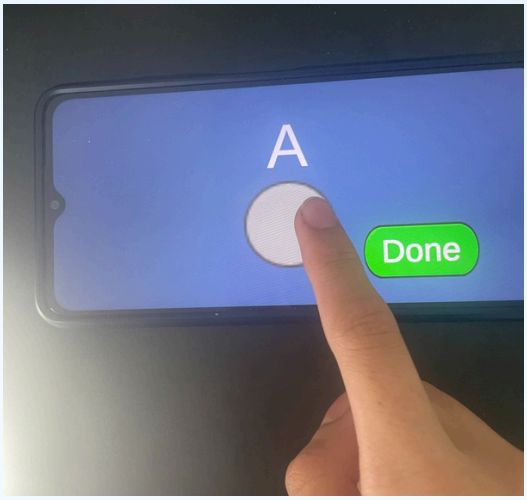
APP PROCESS



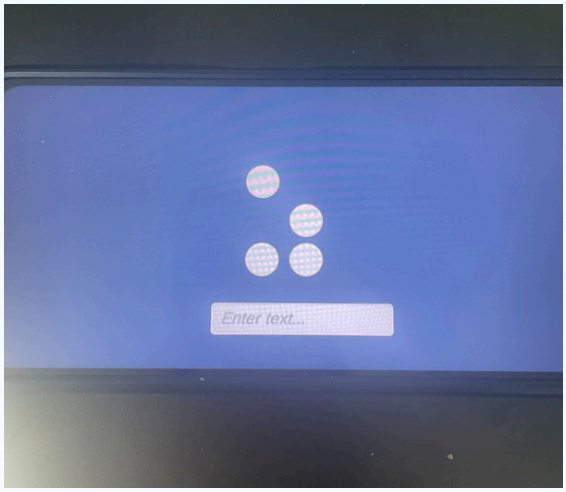
Main Menu



Lessons or Tests



Learning Braille



Test for Active Recall

ABrailleAbility
Empowering Independence

Home Catalog Contact

Improving Accessibility one step at a time.

ABOUT US


Sale

English ABrailleAbility Presc. Label
~~$4.99 CAD~~ From $2.99 CAD


Sale

French ABrailleAbility Presc. Label
~~$4.99 CAD~~ From $2.99 CAD


Sale

Mandarin ABrailleAbility Presc. Label
~~$4.99 CAD~~ $2.99 CAD


Sale

Spanish ABrailleAbility Presc. Label
~~$4.99 CAD~~ From $2.99 CAD

ABrailleAbility
Home Catalog Contact

MY STORE

English ABrailleAbility Presc. Label

~~$4.99 CAD~~ $2.99 CAD Sale

Size

Small | Medium (Standard) | Large

Braille Language

UEB | ~~Grade 1 Uncontracted~~ | ~~Grade 2 Contracted~~

Quantity

− 1 +

Add to cart

Pay with PayPal

More payment options

★ **Revolutionize Accessibility, Reduce Errors** ★

Say goodbye to medication mix-ups! Our **3D-Printed Braille Prescription Label** is designed to empower the visually impaired by providing a safe, reliable way to identify prescriptions independently.

♻️ **Sustainable & Stylish**

Crafted from **PLA+**, a biodegradable material made from corn starch and sugarcane, our labels are eco-friendly, lightweight, and durable. Each label is expertly 3D-printed using the **Ender V3 SE** for precise, beautiful results.

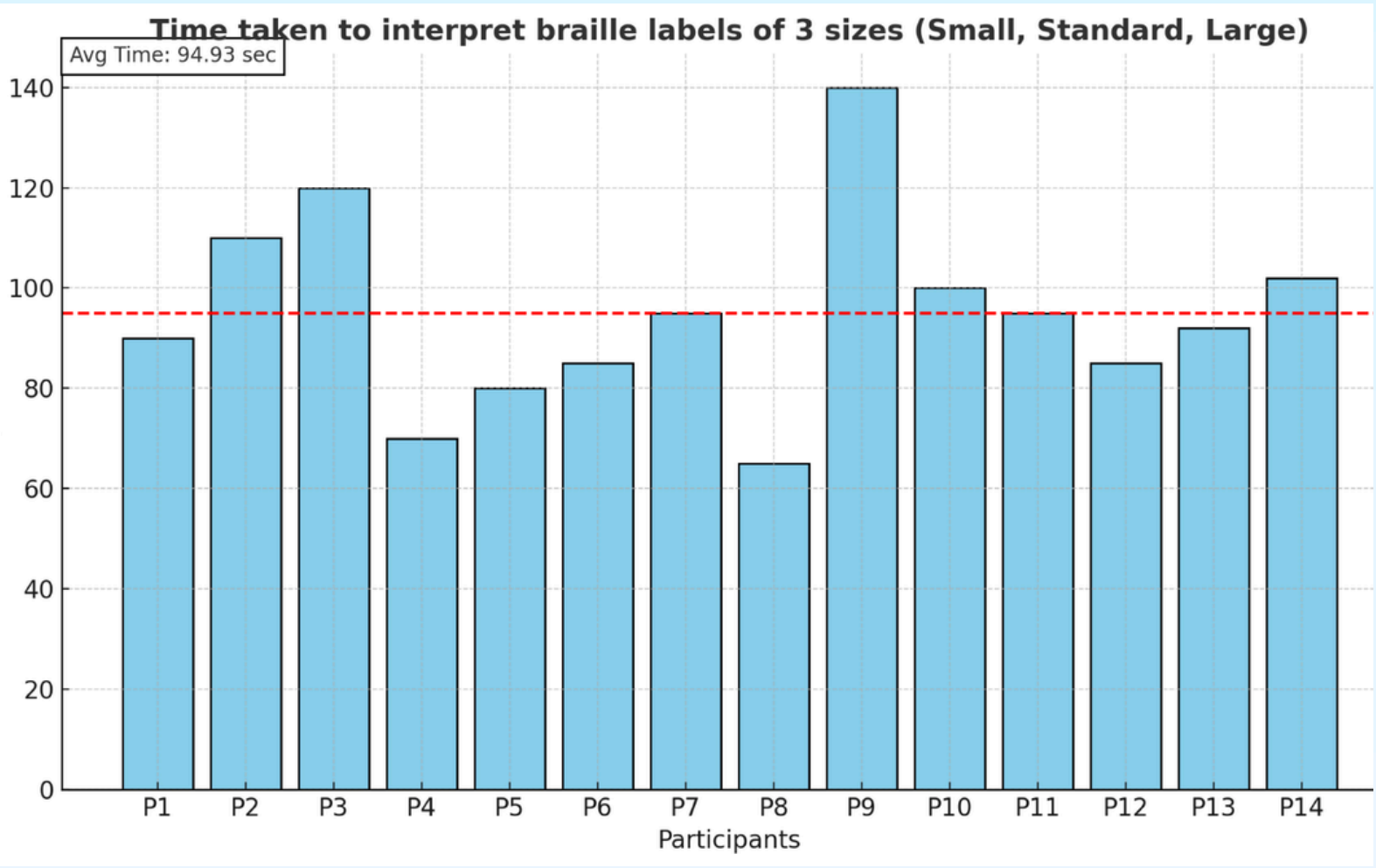
✨ **Why Choose Our Labels?**

✅ **Reduce Medication Errors**: Clear Braille ensures safety and confidence.
✅ **Enhance Independence**: Make managing prescriptions easy and accessible.
✅ **Eco-Friendly Choice**: Support the planet with biodegradable materials.
✅ **High-Quality Craftsmanship**: Flawlessly printed for durability and style.
✅ **Customizable Sizes**: Perfect for all types of prescription containers.

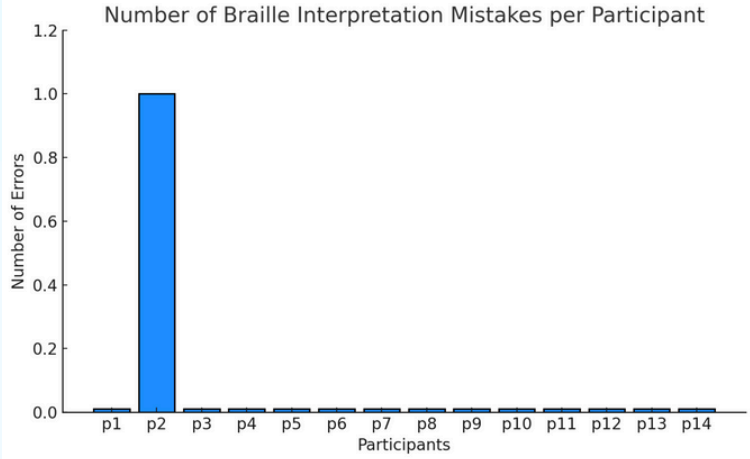
📏 **Available in 3 Sizes!**

🔹 **Small**: Fits compact pill bottles for travel or light prescriptions.
🔹 **Medium**: Designed for standard-sized pill bottles used in most households.
🔹 **Large**: Perfect for larger containers or bulk medications.

📍 **Practical and Thoughtful**

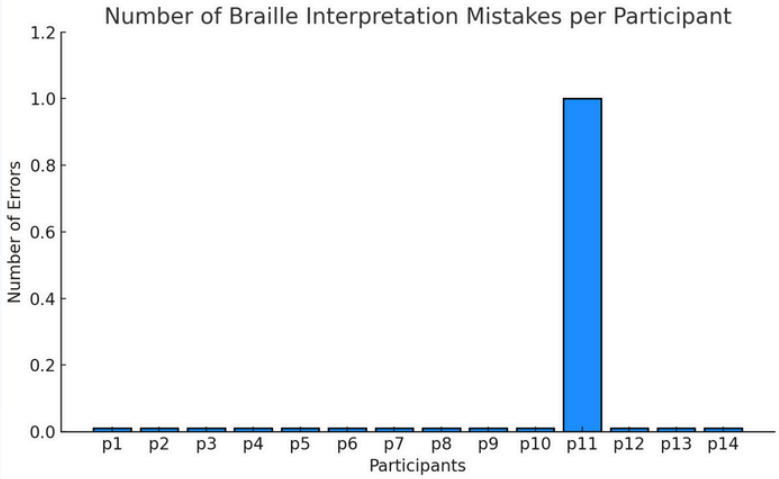


Data Results (Med. Label)

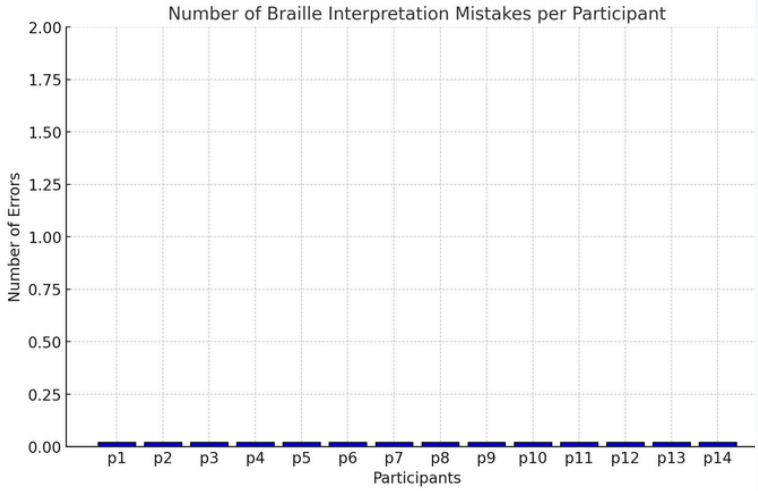


ZOOM IN to view

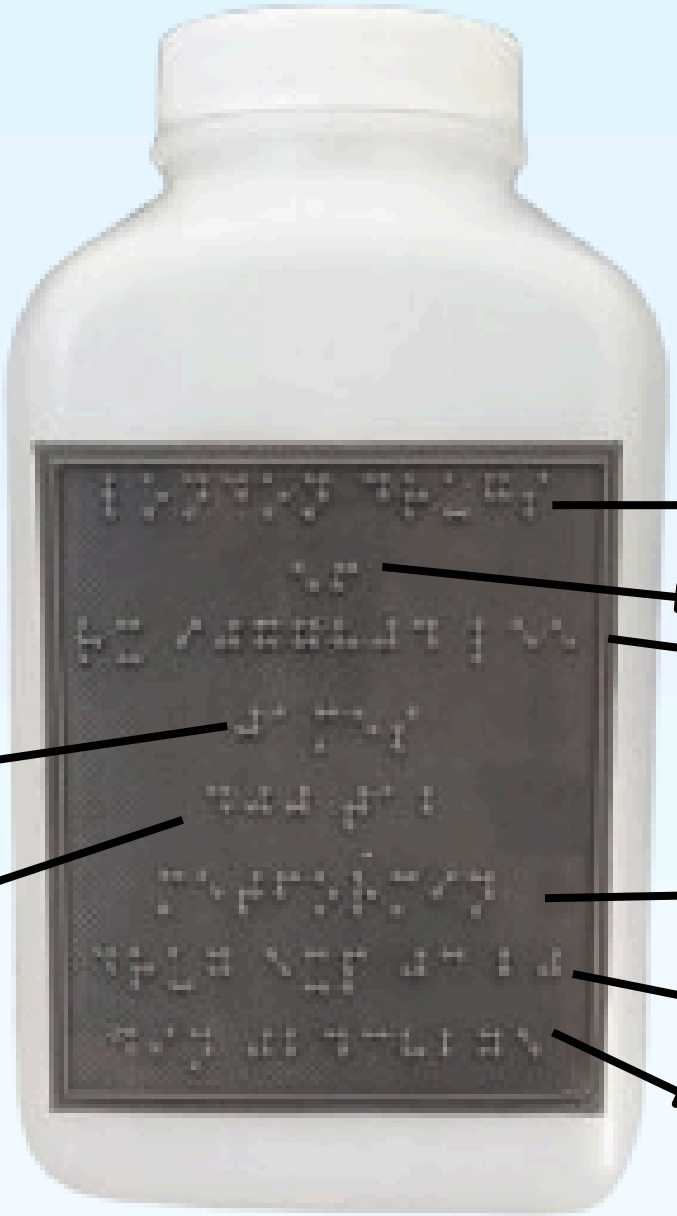
Data Results (Large Label)



Data Results (Small Label)



INFO



Pharmacy Name

Branch #

RX #

Doctor Name

TAB #

Drug Name

Drug Expiration

DIN #

Dosage/Instructions & patient name on the back of the bottle for prioritized clarity.

INNOVATION FEEDBACK

Your Labels are an excellent design, they clearly communicate your solution and vision. - Startup Founder

Your project supports an underserved need, and its good to see you have a passion for helping others. - Associate at Blackstone

Your idea is excellent and is something I would definitely recommend getting a patent for - Teacher

Very Creative idea. I look forward to seeing how it develops in the future. - Analyst at J.P Morgan

The labels provide a real solution to a real-world problem, great job. - Biomedical Engineer

The Braille is very distinct and easy to read! - Volunteer

You have a gift, it is great you chose to use that gift to help others. - Venture Capitalist at Sequoia Capital

You have an impressive prototype. - Volunteer

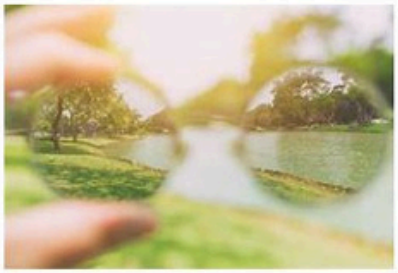
It has real potential to develop as an innovation and business. - Engineer

PROJECT PHOTOS

WEBSITE BLOGS

Useful Resources and Blog Posts for those who are Blind & Visually impaired posted on my website and updated weekly.

Blog Posts

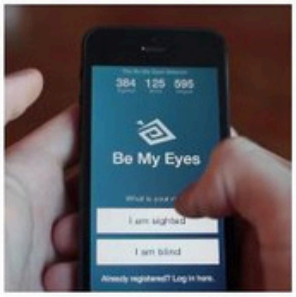


Inspiring Stories of People Thriving with Vision Loss – OE Patients (ophthalmicedge.org)

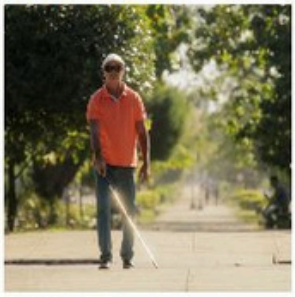
Sight loss and isolation: How I combat loneliness – My Blurred World

29 Life-Changing Activities for Visually Impaired Adults – Blind Learning Zone

Useful Resources



26 Best Apps for the Visually Impaired [2021 Edition] – Everyday Sight



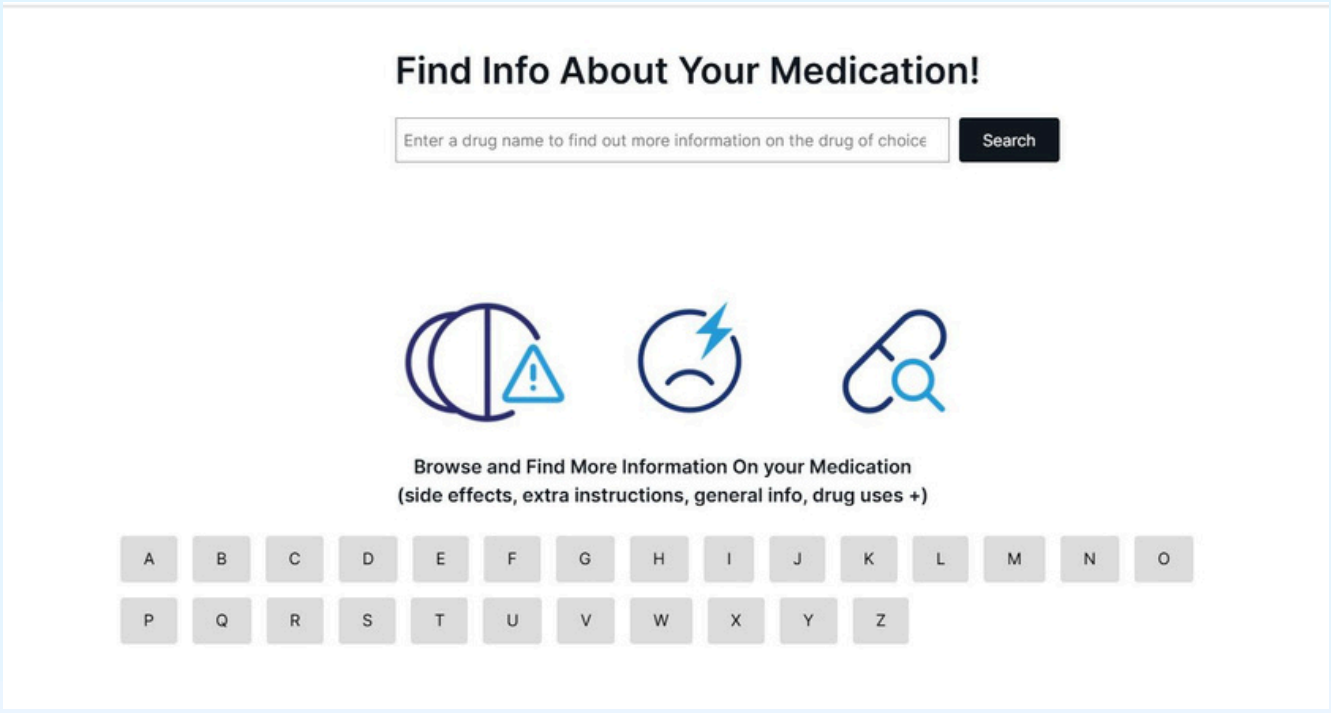
Master 12 Key Skills for Visual Impairment: Gain Mobility & Freedom (orcam.com)

8 Useful Travel Tips for the Visually Impaired – AFAR

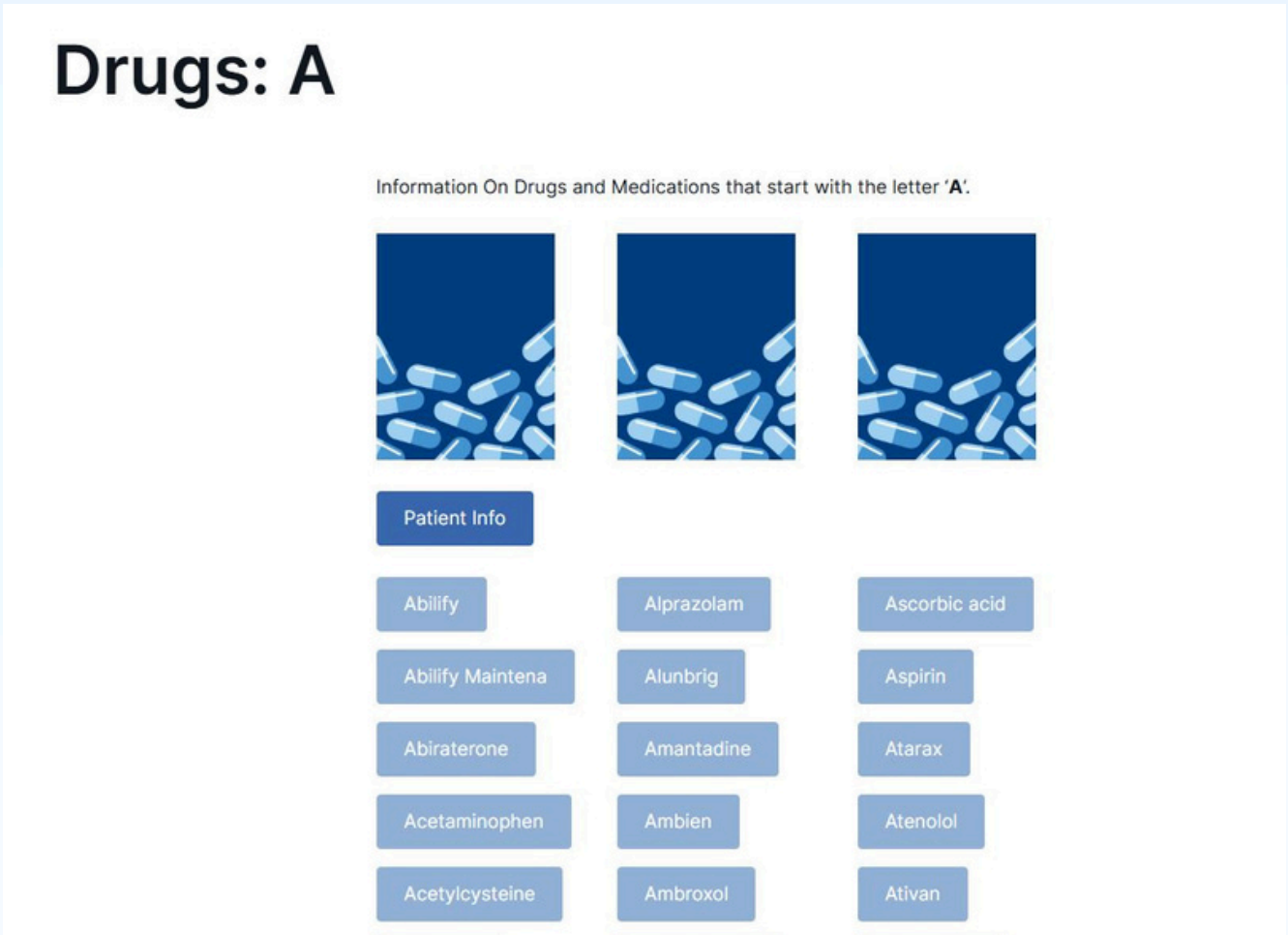
Resources for the Visually Impaired (allaboutvision.com)

SIZES

WEBSITE DRUG FINDER



Find info of any drug from A-Z



WEBSITE SUPPLEMENTALS

Information Contained on Our 3D- Printed Prescription Labels

Dosage Instructions and Prescribed Physician name

Medication name & patient name

DIN Number & Pharmacy Information

Expiration Date & Additional instructions

Braille Learner Section: Contracted And Uncontracted Braille

Grade 1 Contracted

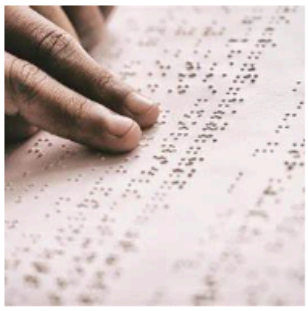
Learn Now!

Grade 2 Uncontracted

Learn Now!

Nemeth Braille

Learn Now!



Unified English Braille (UEB)

Learn Now!

Sources for Additional Braille learning on top of our Application BrailleBuddy

ABB: Improving Medical Information Accessibility using Technology

Many Blind & Visually impaired individuals rely daily on prescription and over-the-counter medication information. Yet, for this community, accessing accurate and understandable drug information presents a significant barrier. Traditional Medication info papers are often printed in small fonts that are difficult to read, or entirely inaccessible without assistance. According to the CNIB Foundation, this lack of accessible information contributes to confusion, dependence on caregivers, and an increased risk of medication errors for the partially sighted.

To address this issue, I created ABB, a website designed to provide clear, comprehensive, and accessible drug information. My website is TTS compatible allowing Blind users to safely access it using their device of choice. ABB's core feature is its "Find Info About Your Medication" tool, where users can search any drug from A to Z and instantly access essential info on their medication like dosages, side effects, usage instructions, and additional safety guidance. ABB eliminates the need to rely solely on printed labels or secondary sources. Instead, users can independently confirm how to take their medication, understand possible risks, and access clear guidance tailored to their needs. By centralizing this information in one easy-to-navigate platform, ABB reduces confusion, minimizes errors, and promotes confidence in daily health management.

Beyond medication data, ABB offers educational blog posts, practical guides, and related resources**,** giving users more than just drug facts and empowering them with knowledge to make safer, more informed health decisions. By combining inclusive design, accurate data, and practical tools, ABB supports independence, confidence, and accessibility in everyday healthcare.

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2. DailyMed**.** (n.d.). *Search results: DailyMed drug database*. U.S. National Library of Medicine. Retrieved from https://dailymed.nlm.nih.gov/dailymed/search.cfm/
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BrailleBuddy: A Gamified App That Allows users to learn Braile

As of 2025, approximately 1.5 million people in Canada suffer from either total or partial blindness. According to the CNIB Foundation, (Canadian National Institute for the Blind), only an estimated 10% of them are fluent in Braille despite its importance in promoting literacy, independence, and career opportunities. As stated by many this is primarily due to a lack of tools, with the pre-existing ones being either unreliable, unaffordable or unengaging,

To provide a solution to this major problem, I created BrailleBuddy to pair alongside ABrailleAbility. BrailleBuddy is a free mobile application that teaches Grade 1 & 2 Braille through gamified and tactile learning. Using a smartphone's screen vibrations, users drag their finger across the screen where the phone will then vibrate when a finger is touching a Braille dot. This trains users to recognize letters, words, sentences, and punctuation in a progressive, interactive format. Learning is structured into stages: mastering the alphabet, forming words, and building sentences with proper grammar and punctuation. Each stage concludes with short tests to reinforce comprehension before advancing, ensuring steady skill development.

The data collected from a test run with 13 participants unfamiliar with Braille showed promising results. Participants using traditional Braille learning methods were able to learn on average 6.2/26 Braille letters in 25 minutes, whereas participants using BrailleBuddy were able to learn 11.3/26. These Results Show that BrailleBuddy was almost 2 times as effective as traditional methods.

Unlike traditional resources, BrailleBuddy requires no specialized hardware, making it affordable, portable, and scalable. By transforming smartphones into Braille tutors, it bridges a critical accessibility gap and empowers users with literacy, confidence, and independence.

1. Mfamobani, L. (2023). *The Importance of Braille on World Braille Day*. Rick Hansen Foundation. Retrieved from https://www.rickhansen.com/news-stories/blog/importance-braille-world-braille-day
2. Braille Literacy Canada. (n.d.). *For many Canadians who are blind, braille is an essential medium of literacy*. Braille Literacy Canada. Retrieved from https://www.brailleliteracycanada.ca/en/braille/facts/literacy
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ABrailleAbility Commerce: Our Online E-Business

To Pair with ABrailleAbility, I launched an online commerce platform that allow ABrailleAbility users to place customized orders on Labels catered to their appropriate medication.

Through the platform, users can place orders for labels in five different languages: English, Spanish, French, Mandarin, and Arabic, and select from three label sizes: Small, Standard, or Large. To support varying levels of Braille literacy, labels are available in UEB, Grade 1, and Grade 2. This flexibility ensures each user receives labels suited to their needs and comfort level.

I am currently working toward developing ABrailleAbility and working on safety outlines for the possibility of pharmacies implementing and using our idea. To develop my business to its full extent, I have been collaborating with Startup founders and Venture Capitalists in the hopes of receiving advice and funding.

My business is currently running in stealth but will be up for the public when I receive my patent shortly. So far, we've shown promising results with 12 labels distributed in person.

For the future, we aim to partner with pharmacies to enable mass distribution, helping patients worldwide gain the accessibility they deserve.