



# Bashini Website and App – An Overview

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In today's world where scientific technology is growing exponentially and Artificial Intelligence (AI) is emerging, language and related things are developing in various ways. Digital translations and transliteration are examples of them.

Many translation apps and websites like Google Translate, SayHi, ITranslate, TripLingo, Microsoft Translator, Naver Papago Translate, Translate, Human Translations Reign Supreme, Linguee help to translate text and audio into different languages. Many research papers have been published about these. Bashini is a translation app and website developed in 2022 by the Government of India (GOI). Articles about Bashini are likely to be more and more expected in the future. So this article is an introductory attempt on the overview of Bashini app and website.

This article is a descriptive article about a translation website and app. Information for this article has been obtained through secondary data available on the Bashini website and app. The article is particularly explained with examples of Tamil and English translations.

**Key words: Tamil, Translation, Website, App, Bashini, Participation**

## Bashini Website and App – An Overview

### Introduction:

Language is the symbol of a nation. It is also a tool to exchange traditional cultures and values. “Language is the road map of a culture. It tells you where its people come from and where they are going,” says Rita Mae Brown<sup>1</sup>. “A language is a perfect reflection of the character and development of its speakers” is what Mahatma Gandhi said<sup>2</sup>. Through this we can know the importance of language for the development of a country.

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Indian poet Mahakavi Subramania Bharati in his song “யாமறிந்த மொழிகளிலே தமிழ்மொழி போல் இனிதாவது எங்கும் காணோம்” (Among the languages, there is no language as sweet as the language Tamil)said “தேமதுரத் தமிழோசை உலகமெல்லாம் பரவும்வகை செய்தல் வேண்டும்” (The sweetest Language Tamil should be spread all over the world). G.U. Pope(George Uglow Pope) was born in Canada and came to India for Christian service, a Tamil scholar who worked in Tamil Nadu for more than 40 years, he introduced Tamil literature to the Westerners by translating the rich Tamil literature like Tirukkural, Naladiyar and Thiruvvasagam into English.

Today's digital world also lends a hand to everyone to do more translations in a simple way like G. U. Popecontributions to the Tamil.

### Bashini App:

Bashini is the“National Language Translation Mission” (NLTM) of the Ministry of Electronics and Information Technology (MEITY), Government of India (GOI).

Bashini aims to increase the content of Indian languages and provide easy access to internet and digital services for all Indians in their own language<sup>3</sup>.

On July 2022 to provide technical solutions for language, <https://bhashini.gov.in>(website)and Bashini App was launched by Prime Minister of India Mr. Narendra modi.

Bashini helps to develop and share open source models, tools and solutions (products and services) for Indian languages. This is achieved by using emerging technologies such as Artificial Intelligence and Machine

<sup>1</sup> <https://www.british-study.com/en/blog/inspirational-quotes-for-language-learners>

<sup>2</sup> <https://www.goodreads.com/quotes/37243-a-language-is-an-exact-reflection-of-the-character-and#:~:text=Sign%20Up%20Now-,A%20language%20is%20an%20exact%20reflection%20of,and%20growth%20of%20its%20speakers.>

<sup>3</sup> <https://www.bhashini.gov.in/en/>

Learning (ML) and Natural Language Processing (NLP) in new business ventures, industries, academics, research groups, activists and state and central governments.

Bashini aims to train AI models and build large datasets in specific Indian languages, including translation, audio-to-text, text-to-audio conversion for general use and audio-to-audio translation for specific domains such as education, healthcare, and finance.

An Independent Business Division (IBD) and Digital India Bashini Division (DIBD) are created under the Digital India Corporation (DIC) to coordinate Bashini's activities, particularly for developing the environment for language translation technology involving startups<sup>4</sup>.

### **Research Gap:**

Many translation apps and websites like Google Translate, SayHi, ITranslate, TripLingo, Microsoft Translator, Naver Papago Translate, Translate, Human Translations Reign Supreme, Lingueehelp to translate text and audio into different languages. Many research papers have been published about these. Bashini is a translation app and website developed last year by the Government of India. Articles about Bashini are likely to be more and more expected in the future. So this article is an introductory attempt on the overview of Bashini app and website.

### **Research Methodology:**

This article is a descriptive article about a translation website and app. Information for this article has been obtained through secondary data available on the Bashini website and app. The article is particularly explained with examples of Tamil and English translations.

### **Purpose of Bashini Website and App:**

Bashini aims to create a National Public Digital Platform for languages to create services and products for citizens using the power of Artificial Intelligence and other emerging technologies.

Bashini is based on developing language datasets and AI technologies to develop language technology solutions to enable all Indians to achieve the following goals in the future:

- Easy access to the Internet, information, services and applications in one's own language, including voice-based search
- Search, listen and watch one's native language videos, audios and documents created in other Indian languages
- Improved access to services in specific areas that have their own vocabulary, such as health, engineering and law
- Communicating with another Indian speaker in his/her own language

<sup>4</sup> <https://innovateindia.mygov.in/bhashini-challenge/>

- Children learning digitally in their mother tongue
- Creating content in one's own language

Bashini is building an integrated framework underpinned by the principles of open data and open source software to enable research efforts and contributions from the ecosystem. This will encourage the ecosystem to work in an integrated approach to develop diverse solutions. The objective is to create a community of contributors working with an integrated approach to help realize the stated objectives of Bashini<sup>5</sup>.

### **Bashini's Roadmap:**

Bashini's roadmap is divided into four tracks. The first track, the foundational track, consists of activities such as publishing the ULCA API, setting up a data and model repository, developing a benchmarking system and identifying and using data collection tools.

The second track, the contribution track focuses on gathering training and benchmark datasets, encouraging data contributions from government agencies, language chapters, communities, etc., promoting crowdsourcing efforts and collecting open source language models.

The third track, the innovation track includes activities such as using hackathons and challenge rounds to develop applications, developing inter-ministerial projects that use Bashini to deliver citizen-centric services and conducting workshops to encourage startups to use contributed data and models.

The fourth and final Grand Challenge track focuses on conducting a major challenge each year related to the objectives of BASHINI and encouraging participation from academia and industry<sup>6</sup>.

### **Anuvaad:**

Anuvaad is a translation platform on the Bashini website and app. At present translation and transliteration are available for 13 languages. Input can be done by typing using Unicode or by voice. By clicking on the button "Generate Audio" we can create the audio of the words or sentences that we have typed and received in translation and listen to them. It is also possible to download the text and audio of the input and translated by us.

With phonological input like this, children and the illiterate can provide input to the language store that they can. Also, this tool works as a great tool for learning a language by downloading the input and output audio and arranging it for the user to use and providing correct pronunciation.

Also, this feature has created an opportunity to select both male and female voices<sup>7</sup>.

<sup>5</sup> <https://www.bhashini.gov.in/en/>

<sup>6</sup> <https://www.bhashini.gov.in/en/about>

<sup>7</sup> <https://anuvad.bhashini.gov.in/>

## Repository of Bashini Languages:

Bashini website and app acts as a repository of best languages by “Bhasha Daan”. "Bhasha Daan" means language donation. It invites participants to register and participate.

This “Bhasha Daan” consists of five main sections.

- i. Suno India
- ii. Bolo India
- iii. Likho India
- iv. Dekho India
- v. Dashboard<sup>8</sup>

### i. Suno India:

Suno means “hear”. This tool asks us to type what we hear in that language. In this we can choose the language we know and prefer. We have to type the phonetic sound in our chosen language in Unicode format. Typing the audio we hear can enrich our language. So far, 2021 people have participated in 23 languages<sup>9</sup>.

### ii. Bolo India:

Bolo means “Say”. We can say that it is our vocal donation to enrich our language. If we choose the language of our choice and click on the microphone icon there, the sentences for us will appear on the screen. We should read it without spelling mistakes, it will be beneficial. Annotations are given on how to use the microphone and loudspeaker and what to read before recording. It also has a form to report if the sentence is offensive to any religion, caste, etc., promotes drugs, is related to political issues or gives false information.

So far, 1573 people have participated in 22 languages<sup>10</sup>.

### iii. Likho India:

Likho means “write.” This is the grant to the translation. Here if we specify from which language to which language we want to translate the sentences will be displayed on the screen. We need to translate. There is also a grievance form.

So far, 1148 people have participated in 83 pairs of languages<sup>11</sup>.

### iv. Dekho India:

Dekho means “look.” This section recommends using language that we are proficient. Correct the errors in the sentences visible on the screen and type and submit.

<sup>8</sup> <https://bhashini.gov.in/bhashadaan/en/home>

<sup>9</sup> <https://bhashini.gov.in/bhashadaan/en/suno-india>

<sup>10</sup> <https://bhashini.gov.in/bhashadaan/en/bolo-india>

<sup>11</sup> <https://bhashini.gov.in/bhashadaan/en/likho-india>

So far, 772 people have participated in 18 languages<sup>12</sup>.

#### v. Dashboard:

In this section, the details of the users and languages involved in the above four sections and the output obtained through them are mentioned. State-wise, language-wise date-wise and aggregate data are tabulated and illustrated with graphs<sup>13</sup>.

#### Conclusion:

Communication has become globalized across borders with the help of Artificial Intelligence in today's IT world. Findings like these confirm that language is not a barrier for them. We will also do our part for our Tamil language to uphold the pride of Tamil language by using Bhashini app and website of Government of India to promote Tamil language and develop a better vocabulary.



<sup>12</sup> <https://bhashini.gov.in/bhashadaan/en/dekho-india>

<sup>13</sup> <https://bhashini.gov.in/bhashadaan/en/dashboard>