NEWSLETTER

This issue of our newsletter focuses on the importance of Assistive Technology in the lives of children with dyslexia and other learning differences. Assistive technology helps people with dyslexia overcome their challenge in reading, writing and note-taking and saving time. The idea being, when a person with dyslexia gets assistance in areas challenging to them, they can focus on their strengths and become productive individuals in society. Assistive Technology can be software, hardware or devices that ensure independence and productivity for day-to-day living of the user. What once seemed like science-fiction has now become a reality.

The Editors

How We Read –
A Neuroscience Perspective

Dr. Jaikishan Jayakumar
Center for Computational Brain Research, IIT-M

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The Changing Profile of Technology in Dyslexia

Ajit Narayanan
Former CMD,
Invention Labs
www.inventionlabs.in

I work in the area of assistive technology, so I encounter various kinds of technologies that are being used to help children with special needs. Dyslexia is no exception, and today, in a smart-phone and tablet driven connected world, there is no end of apps that are available for children with dyslexia to develop skills and have access to education.

The role of technology in dyslexia has, in my opinion, gone through 3 phases so far. Pre-2005, most technology was "low-tech" – for example, the use of black-on-yellow text to enhance readability, the use of cardboard "windows" to help children focus on one sentence at a time; the use of audio books to help children process information in the form of sound instead of words and text. In today's world of iPads and apps, we may tend to look down on these low-tech tools, but bear in mind high-quality research went into these tools. And they have the advantage of low cost, and non-controversial approval of all.

The second phase was the wave of apps that came out, in 2010-2013, coinciding with the increasing pervasiveness of touch computing. Many of these apps were straightforward translations of low-tech tools into the computing world. For example, it is possible to download apps today which will take a website as an input, and then present it to a child with dyslexia one sentence (or one phrase) at a time, to help them read. Similarly, there are software functionalities within most devices today to "read out" content to a dyslexic child –

> I built a technology called FreeSpeech, which allows entire sentences to be visualized pictorially as a 'map of words'... It uses the cutting-edge of machine translation, artificial intelligence, and natural language processing to achieve what looks like a very simple operation – the conversion between the world of pictures, and the world of words.

often in very natural synthesized voices. And there is an enormous variety of applications to help children learn words and language, in the form of flashcards.

This generation of software did not lay claim to any great technological sophistication, and in reality, it is possible for a team of smart engineers to re-create many of them in a few weeks.

But the third generation, which we are beginning to see just now, belongs to a different class. This technology is leveraging algorithms designed for entirely different applications – developed by the Googles and Stanfords of the world – to the world of special needs. One of my friends, Navanit Arakeri, has built an app called Spell Better. This innovative application automatically detects and corrects spelling mistakes in a child's writing. Sure, we have all seen this in our word processors. But what makes Spell Better stand apart, is that it helps to correct mistakes which are normally not made by persons without dyslexia – such as phonetic (preshus – precious), real-word mistakes (peace – piece), word boundary errors (verynice – very nice), skipped letters (probley – probably) and irregularly conjugated words (throwed – threw).

Navanit's career was in Microsoft in Seattle, where he was a Product Manager, before he decided to move back to Bangalore and work on technology for persons with disabilities.

My own work has also focused on this dimension of technology. I work mostly with picture languages – the universal ability for everyone to understand and relate to pictures, means that we can use them as a conduit for teaching language and communication. I built a technology called FreeSpeech, which allows entire sentences to be visualized pictorially as a 'map of words'. The interesting thing about FreeSpeech is that the technology that it uses, really is rocket-science.

It uses the cutting-edge of machine translation, artificial intelligence, and natural language processing to achieve what looks like a very simple operation – the conversion between the world of pictures, and the world of words.

I think it is very gratifying to see that assistive technology for persons with dyslexia is attracting a new breed of engineers, technologists and inventors today. As it should. With 15% of the world's population having some degree of dyslexia, inclusion – in the field of literacy, in the field of education – is no more a luxury but a necessity. It is heartening to see that it is going to happen, not in a hundred years, but probably before the decade is out.

To learn about Avaz – Invention Labs' award-winning invention that helps people with speech disabilities to communicate, visit: http://www.avazapp.com

MDA Awaz APP

avaz READER — Using The App

Parent Feedback

My daughter K Gargi has been using MDA-Avaz reader application for the past six months. This application is really helpful for her, and her quality of reading has improved. She is showing much interest in reading. In the case of difficulty in reading any passage my daughter on her own uses MDA-Avaz application and she finds the word by herself. This application is user-friendly and helps a lot in my daughter's academic performance, which has also improved. We are really thankful to the MDA Ananya team who have introduced this application.

– Vandhana Karthikeyan

Thank you so much for the app. As a special educator, it helped me a lot to help the kids to read. One child, whom I teach, loved gadgets and was very fond of reading on the tab. His reading using the app was better than reading a text book. He used the "build" option himself and this helped him to improve his vocabulary.

One of my students used to read word by word, later he was able to read in phrases with the help of the app. Most children used the "read-aloud" option to correct their mistakes. Syllabication has helped them read bigger words. After they move on to mainstream schools, they are geared to use the app for reading which would help them in their school work.

– Jarina
Special Educator, Ananya

My son Md. Fazil has improved his learning skills very much through this app. This app is really useful to my son in the way it works. It helps him by guiding him through its features like reading and showing the words which he finds difficult to pronounce. This app also shows him that he can himself creatively narrate stories. It also helps him through the pictures that it contains, these pictures by themselves narrate the stories. I find that my son has improved so much through this reading app.

– S Jaffernisha

Technological Scaffolding for Reading – MDA Avaz, an Assistive Reader App

Mala Natarajan
Systems Head, MDA

While remedial classes teach coping strategies, continuous support during every instance of reading may not be possible. "MDA Avaz", the reading app, provides this assistive framework. Based on well researched and successfully implemented practices, this easy to use app provides familiar reading strategies on demand for any textual material of interest in a personlised manner... With sustained use of Avaz Reader, children who struggle with print become better at processing words and reading independently.

"To learn to read is to light a fire" said Victor Hugo in Les Miserables. If this is so, then sadly many people with Specific Learning Difficulties are in darkness since fluent reading eludes them.

While remedial classes teach coping strategies, continuous support during every instance of reading may not be possible. "MDA Avaz", the reading app, provides this assistive framework. Based on well researched and successfully implemented practices, this easy to use app provides familiar reading strategies on demand for any textual material of interest in a personlized manner. These reinforcements work towards building and strengthening all the facets of reading- decoding, fluency and comprehension. With sustained use of Avaz Reader, children who struggle with print become better at processing words and reading independently.

Firstly, the paper discusses the need for an app that provides **assistance** for reading. The presentation then goes on to showcase the different features of the app – the visual appeal, seamless migration from print to digital content, choice of reinforcing reading strategies, predominantly offline features, customizability etc.

The paper showcases the well-thought-out integration of this app into the teaching-learning process in schools associated with MDA. It then discusses the model adopted to make it economically viable for the developer to sustain progressive improvement in the features of the app, while ensuring it can be afforded by most people.

Madras Dyslexia Association has been working closely with children and observing and measuring the gains from the usage of this app. The paper provides evidence through case studies on the academic, emotional and social impact of this app on its users (with Specific Learning Difficulty).

MDA proposes to take this scalable and customizable assistive device to people with reading difficulties across different demographics, empowering them to read gainfully and independently. It is an educational resource, a productivity tool the people with reading difficulties need to succeed.

A Charter School's Journey into Assistive Technology

By Joshua Jenkins

(This article has been sourced from the website of Yale Center of Dyslexia & Creativity)

In the beginning...

At the end of last school year, my special education coordinator, Susan, asked my colleagues and me what we wanted for the 2011–2012 school year. "A big raise," a couple of us shouted, half-kidding. After the laughter subsided, we answered her in earnest. Someone turned to Susan and whispered, "We need iPads." She brushed it off. "Everyone needs iPads," she said. "I need an iPad, too!" She quickly realized my colleagues were not fooling, not even a little; they were serious about iPads. I was with Susan; I wasn't sure what good an iPad would be in the classroom other than a way for kids (and teachers) to play, get off-task, and inevitably get into trouble. My skepticism didn't last. At the meeting, I felt that I had been all but stoned by my fellow special education teachers who were evangelical about iPads. At the end of this meeting, iPads were in the special education budget, and I was a believer. Continue reading: Here

How to Set-up the iPad as an Assistive Device

Read pages 98 to 113 of Facets published by Dyslexia Association of Singapore for step-by-step instructions to set-up the iPad as an assistive device for your child.

Introducing Scanning Pens

Payel Das
Business Head, India
Scanning Pens

Recognition of the company's diligence was recently earned when the company was chosen as the Exporter of the Year at the coveted Bett Awards 2019, along with a commendation for one of their products... Their products have helped hundreds of thousands of students worldwide and have become a great alternative to a human reading assistant.

2019 has been the biggest year yet for Scanning Pens, the British based assistive technology organisation, since they were founded 15 years ago. They started the year off by opening new offices in Canada and India, and continued by adding a myriad **new features** to their products, with so many more remarkable milestones achieved. Recognition of the company's diligence was recently earned when the company was chosen as the Exporter of the Year at the coveted Bett Awards 2019, along with a commendation for one of their products. They continue to develop new exciting ways to support dyslexics and others with reading difficulties, by taking in every bit of feedback.

The ReaderPen

The ReaderPen is a portable scanner used to help improve the classroom experience for students with reading difficulties. This assistive technology has been introduced into thousands of schools, workplaces, and homes to aid in the development of reading independence. The ReaderPen can be used in place of a human reading assistant to promote student confidence while improving their outcomes. A study from Bath Spa University found that "72% of participants felt their reading had improved".

A student from a Harrow Way Community school stated in relation to the ReaderPen: "It has helped me so much, I've just noticed a big difference in my English since I've been using it. I'd totally recommend anyone who struggles with reading to get it."

That student's teacher went onto say: "The ReaderPen's very discreet. I would definitely advise it as a way to support a student that needs some help."

There are a number of other useful features the ReaderPen contains.

- Scanned text can be stored for reviewing later, even taking that text and uploading it directly onto a device. That text can be read aloud or using the included headphones, being adjusted to fit the needs and speed of whoever is using the ReaderPen.

- Users can scan directly onto their devices with the ReaderPen, simply by plugging in the included USB.

- Audio can be recorded by the ReaderPen using the voice recorder – particularly useful for someone with a limited working memory.

For customers with a limited vocabulary, the ReaderPen has a built-in dictionary that can be used to instantly look up the definition of a scanned word.

Additionally, the pen is able to scan Spanish and French. Scanned text can be read with multiple, different accents, including Indian English.

The pens don't require any additional software to operate and future features come with their free upgrades.

The ExamReader

In addition to the ReaderPen, Scanning Pens offers an exam support pen also. This scanner is similar to the ReaderPen but with limited functionality to allow for use in exams. The ExamReader provides students with an alternative to a human reader. Help them develop their confidence in their literacy skills and ease the stress of examinations.

Along with each delivery is an implementation guide, showing you how to make use most of your scanning pen. If you need extra support, Scanning Pens is always available to contact and will provide free training when requested.

To sign up for your 30 day free trial, available to all schools, colleges, and universities, take a look at their website at www.readerpen.com
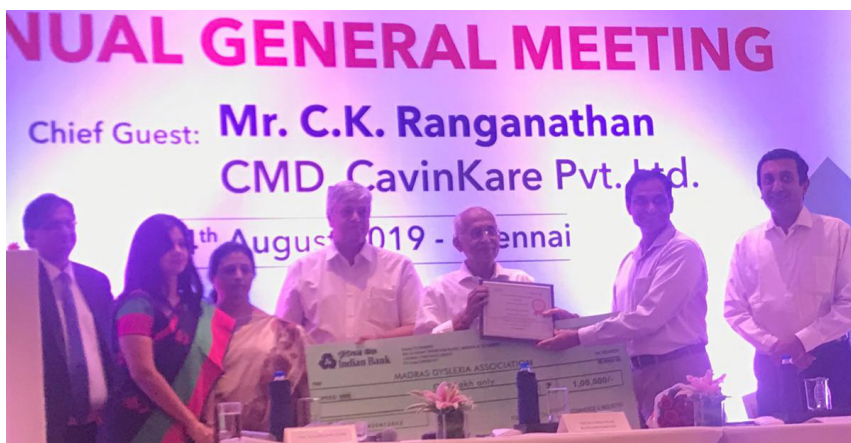
MCCI Award

Madras Dyslexia Association along with Brakes India was awarded the MCCI TAFE CSR Award 2019 on 14 August, for the phenomenal work done in the field of Dyslexia by training 5000 government-aided and government school teachers in the past one year.

Champions of Chennai

Madras Dyslexia Association was chosen as one of the "Champions of Chennai" awarded by the KSA Trust, on 17 August. The awards to all winners were given away by Dr. Akhila Srinivasan, Managing Director, Shriram Life Insurance.

Happenings at MDA

Visit to TN Police Academy

Students of Ananya Learning and Research Centre visited the Tamil Nadu Police Academy at Oonamanchery for a field visit. The children were fascinated to see how police officers get trained. They were taken around to visit the Model Police Station, the simulated shooting range, the police museum, the swimming pool, and the Apiary maintained by the Police Academy. The academy also served the children and teachers of Ananya a sumptuous lunch. The children volunteered to sing a song for members of the IPS Officers' Wives Association. The students and teachers were given gifts. The visit was organised by the IPSOWA.

Kolkata

MDA started its first Intensive Teacher Training Course at Kolkatta in July 2019 in collaboration with Breaking through Dyslexia. This is the first such training that has been conducted outside Tamil Nadu. The course was widely covered in the local print and electronic media.

NIT Durgapur

A workshop was conducted by National Institute of Technology, Durgapur, on 12 July 2019 on Education of Children with Special Needs. Lakshmi Hariharan, Special Educator and Head, Resource Rooms and D Chandrashekar, President, Madras Dyslexia Association, spoke about Dyslexia and steps taken by MDA to tackle Dyslexia on a large scale.

100 Training Programmes in One Year

MDA trainers ably lead by Lata Vasanth, completed 100 training programmes in the year 2018-2019. Sixty training programmes were sponsored by Brakes India, while 40 were sponsored by Rotary Club of Madras East.

MDA E-Shikshanam

Course 2 of Remedial Instructions for Primary School Children with Specific Learning Difficulties on MDA e-Shikshanam started on 5th September 2019 with 480 enrollments.

New Office Bearers

The AGM of Madras Dyslexia Association took place on 27 July 2019. The new office bearers elected are:

President   : D. Chandrashekhar

Vice President : Shyam Shekhar

Treasurer   : Rajagopal Subramanian

Secretary   : Swetha Krishna

Advisory Board

MDA has constituted a new body, the Advisory Board.

The members of this board have been brought in from various fields of work. They are:

Usha Ramakrishnan, Prema Raghunath, Vinit Wankhede, Venkat Vishwanathan, Ravi Venkatramani, K.K. Raman, G. Chella Krishna, Siddharth Chandrashekhar.

செய்தித்துளிகள்

அனன்யாவின் கற்றல் மற்றும் ஆராய்ச்சி மையத்தின் மாணவர்கள் ஊனமண்சேரியிலுள்ள போலீஸ் அகாடமி (Police Academy)-யைப் பார்வையிடச் சென்றனர். குழந்தைகள் காவல்துறையின் பயற்சிகளைக் கண்டு மிகவும் ஈர்க்கப்பட்டனர். மாதிரி காவல் நிலையம், உருவகப்படுத்தப்பட்ட துப்பாக்கி சுடும் இடம், காவல் துறை, அருங்காட்சியகம், நீச்சல் குளம், மையத்தினரால் பராமரிக்கப்பட்ட தேனீப் பண்ணை முதலியன அவர்களுக்கு காண்பிக்கப்பட்டது. இந்த Academy அனன்யாவின் ஆசிரியர்களுக்கும், மாணவர்களுக்கும் நிறைவான மதிய உணவு அளித்தது. IPS ஆபீஸர்களின் மனைவிமார்களின் சங்கம் இவர்கள் வருகையை ஏற்பாடு செய்திருந்தது. அங்கு வந்திருந்த சங்க உறுப்பினர்களுக்கு அனன்யாவின் மாணவர்கள் தாங்களே முன் வந்து பாட்டுப் பாடி மகிழ்வித்தனர். குழந்தைகளுக்கும், ஆசிரியர்களுக்கும் இச்சங்கம் பரிசுகள் கொடுத்து வழியனுப்பினர்.

கல்கத்தா:

MDA-வின் சிறப்பு ஆசிரியர் பயிற்சி கல்கத்தாவில் ஜூலை 2019-ல் Breaking Through Dyslexiaவுடன் இணைந்து செயல்படுத்தப்பட்டது. இதுவே தமிழ் நாட்டிற்கு வெளியே செய்யப்பட்ட முதல் சிறப்பு ஆசிரியர் பயிற்சி முகாம் ஆகும். இப்பயிற்சி பற்றி அம்மாநில பத்திரிகைகளிலும், மின்னணு ஊடகத்திலும் சிறப்பாக பிரபலப்படுத்தப்பட்டது.

NIT Durgapur

தனிப்பட்ட தேவைகள் உள்ள குழந்தைகளுக்கான கல்வி போதனைக்கான ஒரு பயிலகம் NIT துர்காபூரில் 12-ம் தேதி ஜூலை மாதம் 2019-ல் நடந்தது. சிறப்புப் பயிற்சியாளரும், உதவி வாய்ப்பு அறையின் (RESOURCE ROOM) தலைவியுமான திருமதி. லக்ஷ்மி ஹரிஹரன், எம்.டி.ஏ.வின் தலைவர் திரு. டி. சந்திரசேகர் கற்றலில் குறைபாடு பற்றியும், அதனைப் பெரிய அளவில் கையாளுவது பற்றியும் உரையாற்றினார்கள்.

MDA E-Shikshanam

MDA E-Shikshanam-ல் 5-ம் தேதி செப்டம்பர் மாதம் 2019-ல் கற்றலில் குறைபாடுள்ள துவக்க பள்ளி குழந்தைகளுக்கு தீர்வு முறைகள் 2-வது கட்டமாக ஆரம்பிக்கப்பட்டது. இதில் 480 பயிற்சியாளர்கள் பதிவு செய்து கொண்டனர். இதில் ஆரம்ப பள்ளி ஆசிரியர்களும் பதிவு செய்து கொண்டனர்.

புதிய அலுவலகப் பொறுப்பாளர்கள்

எம்.டி.ஏ வின் வருடாந்திர அங்கத்தினர்கள் கூட்டம் 27-ம் தேதி ஜூலை மாதம் 2019-ல் நடந்தது. புதிய தலைமைப் பொறுப்பு ஏற்றவர்கள் வருமாறு,

தலைவர்	:	திரு. D. சந்திரசேகர்
உப தலைவர்	:	திரு. சியாம் சேகர்
பொருளார்	:	திரு. ராஜகோபால் சுப்ரமணியன்
செயலாளர்	:	திருமதி. ஸ்வேதா கிருஷ்ணா

ஆலோசனைக் குழு

எம்.டி.ஏ ஒரு புதிய அமைப்பாக ஆலோசனைக் குழு ஒன்றை நிர்மாணித்தது. இதன் அங்கத்தினர்கள் பல்வேறு துறை சார்ந்தவர்களாகத் தேர்ந்தெடுக்கப்பட்டனர்.

அவர்களாவன:

திருமதி. உஷா ராமகிருஷ்ணன், திருமதி. பிரேமா ரகுநாத், திரு. வினீத் வான்கடெ, திரு. வெங்கட் விஸ்வநாதன், திரு. ரவி வெங்கடரமணி, திரு. K.K. ராமன், திரு. செல்லா கிருஷ்ணா, திரு. ஸித்தார்த் சந்திரசேகர்.

ஒரு வருடத்தில் 100 பயிற்சி முகாம்கள்

திருமதி. லதா வசந்த் தலைமையில் எம்.டி.ஏ பயிற்சியாளர்கள் 2018-19-ல் எடுத்த முயற்சியின் பயனாக 100 பயிற்சி திட்டங்களை முடித்தனர்.

இதில் 60 பயிற்சி முகாம்களுக்கு பிரேக்ஸ் இன்டியாவும், 40 பயிற்சி முகாம்களுக்கு ரோட்டரி சங்கம் சென்னை கிழக்கும் ஆதரவு அளித்தனர்.

MCCI Award

ஒரு வருடத்தில் 5000 அரசாங்க, அரசாங்கம் சார்ந்த பள்ளி ஆசிரியர்களை கற்றலில் குறைபாடு பற்றிய தனித்தன்மை வாய்ந்த பயிற்சியை அளித்தமைக்கு BRAKES INDIA-வுடன் சேர்ந்து MDA-விற்கு MCCI TAFE CSR விருது 2019 ஆகஸ்ட் 14-ந் தேதி வழங்கப்பட்டது.

Champions of Chennai

சென்னை முதன்மையாளர்களில் ஒருவராக MDA-வை KSA Trust 17-ம் தேதி ஆகஸ்ட் மாதம் 2019-ல் கௌரவித்தது. வெற்றியாளர்களுக்கு விருதுகளை ஸ்ரீராம் ஆயுள் காப்பீடு நிறுவனத்தின் தலைவர் திருமதி. அகிலா சீனிவாசன் விருதுகளை வழங்கினார்.

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