

Screen readers, audio-described software, and films: Inside Opeoluwa Akinola's mission to empower people with disabilities

By Nathaniel Bivan May 29, 2025



Image source: Techcabal

At three years old, Opeoluwa Akinola began to lose his sight. He was diagnosed with retinitis pigmentosa, a rare genetic disorder that gradually narrows the field of vision until no sight remains. In a handful of years, his vision was completely gone.

Everything changed for Akinola. The world slowed and obstacles appeared at every turn. He grappled with limited access, a loss of independence, and the quiet isolation that often shadows disability. Yet, for all he endured, he was determined not to let his disability define the rest of his life.

Nearly a decade has passed, and Akinola is now the co-founder of Accesstech Innovation and Research Centre in Lagos, Nigeria, which he launched to help chart a more meaningful life and career path for those who share similar struggles.

Left behind

A 2024 working paper presented by the International Labour Organisation (ILO) as part of a research project on inequalities, revealed that “higher unemployment rates, lower earnings and a tendency towards self-employment characterise the world-of-work experience” of many people with disabilities.

In Nigeria, where an [estimated](#) 25 million people live with disabilities, persons with visual impairments [face distinct challenges](#) including exclusion from educational opportunities and employment. According to [World Bank](#) data, only 0.3% of 18 million disabled people of working age in Nigeria are gainfully employed. Limited government support and societal stigma have also left many marginalised, often confined to lives with few economic opportunities.

“I started by mastering a talking computer owned by a friend who returned from the UK,” Akinola said.

It was 1992, and he was in his early twenties.

When his friend traveled again, he kept sending him updates about groundbreaking assistive technology and this only moved Akinola, in 1995, to volunteer at a nonprofit where he got the chance to work with a computer with a screen reader designed to assist the visually impaired.

“In 1999, I started working at a school, teaching blind students how to use computers,” Akinola said. “I had to train myself on the job. With the help of my boss and some instructional cassettes, we developed a training curriculum. We were the first to do this in West Africa.”

The computer training center at the Nigerwives Braille Book Production Centre, established by expatriates in Nigeria, was the first of its kind in West Africa. Akinola, its first instructor, was tasked with developing the curriculum which he created with help from a colleague who had experience with the West African Examinations Council. “It was basically a curriculum on teaching computer skills to blind people,” Akinola said.

The idea was met with disbelief at first, he recalled. “A lot of them marvelled at the fact that they could use computers,” he said. “When they graduated, it drew attention to the program.”

Among the early participants was a young woman with a brain tumor that resulted in blindness and short-term memory loss who struggled to keep up. “Her mother kept bringing her religiously,” Akinola said. “We trained people from Maiduguri, from Gombe—they stayed with relatives or anywhere they could just to attend.”

Some of the trainees secured stable employment, including positions with multinational oil and gas company, Shell, and as lecturers. “By the time I left the centre, we had conservatively trained between 20 to 30 people,” he said. “That’s

not counting the group trainings we did across the country, particularly in the north.”

Scaling training opportunities

By 2020, Akinola had earned a master’s in disability studies from the University of Leeds and a degree in history from the University of Lagos, Nigeria.

Eager to see others like him attain the levels he’d reached despite his disability, he launched Accesstech Innovation and Research Centre to help people with disabilities gain access to digital skills to improve their academic and career prospects.

“When we started, we were using a one-room self-contained space behind somebody’s house,” Akinola said. “But we had to give it up because business wasn’t coming, and we couldn’t sustain it. We had to start training people from home.”

The centre had only one trainer and charged just ₦20,000 (around \$25) per participant. “It was more like a giveaway,” he said. “We trained about five people.”

Initially, the centre offered a one-size-fits-all curriculum. But it soon became clear that clients had vastly different digital needs. The team pivoted, customising the curriculum to reflect that diversity.

In 2022, Accesstech applied for the Microsoft AI for Accessibility grant—and won. The funding, awarded in January 2023, allowed the organisation to rent and equip a proper training facility. “The idea behind our proposal was to create a centre with a dual purpose,” Akinola explained. “To provide assistive technology, and at the same time, offer digital rehabilitation, teaching digital skills to people with disabilities. That’s still what we do.”

The target for the one-year project cycle, which ran from May 2023 to May 2024, was to train 200 people. The training was offered free of charge. By the end of the cycle, 238 people had completed the program. Most of the sessions were group-based, with a cap of ten participants at a time, a limitation dictated by the centre’s small size.

To extend their reach, the team introduced online trainings. “That allowed us to reach more people, and from farther afield,” Akinola said. “We had participants from Kenya, Ghana, Burundi, Uganda, and of course Nigeria. All in one class.”

Today, Accesstech operates on a dual model. On one hand, it trains corporate clients, who pay between ₦300,000 (\$187) and ₦500,000 (\$312) depending on the scope and complexity of the training. On the other hand, the organisation continues to serve individuals who cannot afford to pay.

Paying it forward

Divinegift Usman, one of nearly 5,000 of Akinola's students across Africa, is currently a tutor at Nigeria's National Eye Centre in Kaduna, a city in the country's Northwest region.

Growing up, school was always a challenge for Usman. In the early years, he loved reading and was deeply committed to his studies. But after losing his sight at age nine, everything changed; he could no longer read on his own, and others had to read aloud to him.

"It wasn't easy, but that's how I began to adjust," he told Tech Cabal. "I learned to listen carefully, and eventually realised they could record the readings on my phone so I could replay them whenever I needed."

Outside the classroom, the changes were just as stark. Usman once loved playing football and video games. But now, he would come home from school and go straight to sleep. As he became more withdrawn and increasingly spent time alone in his bedroom, his friends stepped in with creative ways to keep him engaged. "They started playing games with me that didn't require sight, so I wouldn't feel so isolated," he said.

Still, something had changed irrevocably for Usman, and it wasn't until joining Accesstech that he began to see possibility again on the horizon.

He pursued a degree in computer science at the Federal University of Technology, Minna, relying on friends who recorded lectures and notes on his phone. During his National Youth Service Corps (NYSC) tenure, a mandatory one-year program for Nigerian graduates under 30, he was posted to the National Eye Centre in Kaduna, where he was tasked with recommending digital tools for the visually impaired. In 2021, after completing the program, he learned about Akinola's organisation and enrolled.

"The training lasted twelve days," Usman says. "It was basically a train-the-trainer sort of training."

He was introduced to screen reader technology, which helped him to read and understand what was happening on his phone or computer screen, and from the

audio feedback, he was able to navigate tabs and browse the internet. “These are things I didn’t believe visually impaired people could do. My world was revolutionised,” he said.

During the training, Usman met other visually impaired people who were animatedly discussing movies. Curious, he asked how they were able to watch them. That’s when he discovered audio-described films, movies enhanced with narration that explains visual elements. He also met people who could cook, navigate unfamiliar places, and live with a level of independence he had not thought possible.

“So, the twelve days weren’t just about the training. There were other blind people who came around. They showed me the possibilities,” he said.

Being part of Akinola’s network, Usman got a scholarship for a course in the United States that certified him as an accessibility competencies professional. In Nigeria, at that time, he and Akinola were the only two who had such certification in the country, Usman says.

In 2022, Usman launched his nonprofit, [Zions Assistive Tech Solutions](#). He began training other visually impaired youth like himself, including Miriam Agbenu Oyinu, who lived nearly 320 kilometers away in Nasarawa State.

Oyinu was studying Microbiology at Nasarawa State University when she first realised she was losing her sight, an unsettling discovery that came during a lecture. From then on, she made it a point to arrive early to class, always aiming for a seat in the front row.

Before Oyinu’s training started, all she saw were shadows and dark images. Due to the lack of access to a personal computer—Usman runs the training from his home in Kaduna with little infrastructure available—she was unable to learn how to use one. But the Android phone course she took changed things for the better. Usman trained her on how to navigate the internet, make and receive calls, and chat.

Government support

Government support for centers such as Akinola’s and Usman’s remains complicated.

“It isn’t a regulated sector,” Akinola says. “The government comes up with obsolete devices that we don’t want to retain, considering that they are going to

put people at a disadvantage rather than help them. They send their vendors to buy goods we know are not good, and they don't consult us."

But the National Commission for Persons with Disabilities (PWD) in Abuja works "hand-in-hand" with people with disabilities, according to Olanike Akinbola, Head, Development Partnership and Programs Unit.

A polio survivor, Akinbola says that Akinol's Accesstech was instrumental in setting up the agency's braille centre. "When it comes to bringing technology onboard for PWDs (people with disabilities), at the National Commission the inclusion of persons with disabilities, from planning, procurement and the installation point, is very important," she told Tech Cabal.

Living full lives

Akinola, now 53, learned different technological skills for about thirty years with the sole aim of teaching same to people with disabilities. "I teach mainly visually impaired people how to use technology to do things they want to do with their lives as regards employment and leisure," he says.

Accesstech students learn to use applications that include audio and digital editing software, website applications, Microsoft PowerPoint, Excel, Word, text-to-speech, speech-to-text, and artificial intelligence tools.

Because most visually impaired persons struggle with using a mouse, he teaches students to become proficient with the keyboard first, followed by mastering shortcut keystrokes. These skills are taught through both on-site and online training, with sessions often conducted one-on-one or in groups. Accesstech also listens for what employers are looking for in potential hires and ensures their learners develop those skills. "We try to reach as many people as possible," he says. These skills aid people with disabilities in becoming entrepreneurs or to be suitable for employment in larger organisations.

"I look at technology in a very broad sense, that is the devices, and see how a blind person can engage in those places and make use of them properly," he says.

This article is published in collaboration with [Egab](#).

Editors Note: The computer centre Akinola trained at and which was established by expatriates in Nigeria is the Nigerwives Braille Book Production Centre. The article has been edited to include the correct name.