

Expert says echo techniques help locate obstacles

Blind finding their way – thanks to nature

Taking a lead from bats and dolphins, which used sound to navigate, echolocation is a new area of study for researchers looking to assist the blind and partially sighted. Daniel Kirsch, right, has been teaching the technique to students at Birmingham City University.



Education

By Diane Parkes

IT is well known that bats and dolphins use sonar for navigation – but this method of using sound to identify objects is also the latest area for research and teaching for people who are blind and partially sighted.

Known as echolocation, it enables people with reduced visibility to use their own voices to recognise objects which could form barriers.

It may sound like the stuff of science-fiction but in fact echolocation has long been identified as a resource for blind people – it is only now that its benefits are being monitored and recorded.

One of the leading proponents of the system, Californian Daniel Kish, himself blind from birth, has just held two teaching days at Birmingham City University for students aiming to work

in rehabilitation for people who are blind and partially sighted.

Daniel, who at 43 has been using echolocation since childhood and teaches it across the globe, held workshops for around 50 students on the Rehabilitation of Blind and Partially Sighted People diploma course.

He says: "Research has shown that, without teaching, around ten per cent of blind people develop the skills of echolocation to an advanced degree while around 50 per cent develop some rudimentary degree. That may be something like knowing they are in a corridor or enclosed space.

"But with teaching echolocation can be developed and refined much further."

In humans, echolocation depends upon the person developing a series of clicks which then bounce off the object and can be picked up by the trained human ear. By recognising these sounds, the blind or partially sighted person is then able to detect objects around them.



"Instead of using light in a visual way they are using sound in the shape of clicks which then bounce off the object and enter the ear," Daniel explains.

Daniel was lucky. Growing up in a family who supported his echolocation, he was able to develop it to an advanced degree and there are videos on the internet of him hap-

MoreInfo

■ For more on Daniel Kish see the www.worldaccessfortheblind.org website.

■ For more details on the BCU course see www.sightlossmatters.com or contact 0121 331 6405



Daniel Kish with Birmingham City University (Perry Barr) students Jo Mowat, Anna Dunstan and Naomi Davidson

pily cycling down the road. But he says many children are not as fortunate.

"In an ideal situation, a blind infant or child who is supported will be able to develop the skill to a high level but in many cases this does not happen."

Daniel teaches people of all ages and he also teaches those who work with people who are blind or partially sighted – teaching the teachers.

Which is why he visited BCU on one of his rare visits to the UK. As a leading light in courses for rehabilitation for blind and partially sighted people, the university attracts students from across the country, many of whom are already working in the field.

"The most important issue here is not the wow factor in the fact that people who are blind can do things like ride bikes," says Daniel.

"The point is that it can be taught, this ability can be imparted. And that is still a developing process.

"I have trained others and they are training others but we are still in a pilot process really," he said.

"We are amassing a pool of people who can teach this but it is still a fairly new development.

"I would hope this is the future.

"It has definitely caught on in a broad way in a short time so I am hoping it can only keep expanding and continue to offer opportunities for blind people."

'Good teacher who looks for positives'

DANIEL'S expertise certainly impressed students. Hands-worth-based Anna Dunstan knew his work well.

"He is actually really famous, I have read a lot of his stuff," says 34-year-old Anna. "So it was really interesting to see it demonstrated."

"He is also a great teacher. When he was teaching he looked for the positive each time so was very encouraging. And he is a good role model because he has such a high skills level."

And Daniel's promotion of echolocation has allowed it to enter the mainstream.

"Lots of blind people have used echolocation in the past but when they made the clicking noises it was not always considered socially acceptable and they were more or less told not to do it. But Daniel has made it acceptable and recognised."

Also on the course, Martyn Jessep-Long admits he was not as informed as Anna beforehand but was blown away by the demonstration.

"We had seen a video which had blind people riding



Daniel Kish walks around obstacles with Kerensa Barker, Martyn Jessep-Long and Charlie Coyle.

ing bikes and you wonder if that is possible but when we saw Daniel it was amazing," says 46-year-old Martyn who works with visually-impaired adults in Plymouth. "There were ten of us and Daniel was able to walk round us without bumping into any of us just by using the clicks."

And he would hope to use the skill in the future.

"I think it would take quite a bit of time to learn it. Daniel showed us how to do the different clicks and some

people seemed to pick it up straightaway but I think it would take me a while."

Fellow student Naomi Davidson is hoping she can incorporate some of Daniel's teaching in her job. "It gave me a different view on mobility," says 25-year-old Naomi, a rehabilitation assistant working with people with visual impairment in the community in Liverpool, "I knew about Daniel's work but I had not actually seen it in practice and it was brilliant."

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