



OVERCOMING THE UNSEEN

Conquering college with a visual impairment

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BASICALLY, I CAN'T SEE THAT WELL.

Outside of Friley on a fall afternoon, a student coasts down the hill on a longboard. Wearing a helmet and taking cautious strides, he sticks out as a beginner, but he's quickly improving. He sets off on a trip around campus with a more experienced friend, and, lagging slightly, slowly approaches a group of students. He didn't see them until the last minute and managed to squeeze in between them—barely. They look around, confused and a little annoyed.

"It's OK," his friend shouts. "He's blind!"

This daring longboarder is Leland Smith, a sophomore in Bioinformatics and Computational Biology who is determined to have a college experience just like anyone else's.

In elementary school, he found out that he had Stargardt disease, the juvenile form of macular degeneration, which caused all of the rods and cones in his retinas to die off. His vision was relatively unaffected until fourth grade, when his eyesight started to decline. In fifth grade, over the course of just three months, his eyesight went from 20/60 to 20/246—where it is now. Put simply, this means that what someone with no vision loss sees 20 feet away, he sees with the detail as if it were 246 feet away.

"Basically, I can't see that well," he jokes.

Smith is one of 39 Iowa State students who have some type of vision issues and one of 15 who have serious vision issues or are blind. He is considered legally blind, as his central visual acuity, or straight-forward vision, is less than 20/200 in his better eye with correction. While this may be what people think of as "blind," many students with vision issues on campus don't all fall into this category.

"It's quite a huge range," says Wendy Stevenson, a Student Services Specialist for Student Disability Resources. "Visual impairments are anything from being color blind to being totally blind."

BLINDNESS BOOT CAMP

Smith says that as a senior, he was nervous to go from the small and easy-to-navigate high school environment to a big university. In high school, he was trying to get by using the sight he still had, consistently spending five hours a night doing homework. His teachers just offered quick fixes, saying that things like learning braille and using a cane were a waste of time because he still had some sight left.

“Instead of fixing the problem of why I was struggling in school, they tried to find ways around it,” Smith says. “I knew that wasn’t going to work in college.”

Deciding to be proactive, he contacted the Iowa Department of the Blind about their blindness training program. He enrolled in the orientation program, thinking that he would just do it for the summer, but ended up taking off the fall semester to finish the training.

While he was in the training program, Smith lived at the Department in Des Moines. Over the course of the seven and a half months, every Monday-Friday from 8 a.m.-5 p.m., he learned how to do things independently like cook, use a cane, read and write braille, travel and do woodshop. He also learned how to use a computer with JAWS (Job Access With Speech), which reads everything on the screen and can be used for any type of computer work.

At training, he was thrown into things right away, being forced to walk a few blocks and cross three roads by himself in the first week he was there. By the end of the program, he was able to go all the way across town to the mall, walk around the area, and be back within two hours.

The department’s philosophy was that because they were learning non-visual techniques, they should be learned non-visually. So every day Smith was forced to wear sleep shades to block out all of his remaining sight.

“It was a huge confidence builder,” he says. “A lot of adjusting is having the confidence to be like, ‘Yes, I still can do this!’ I might not be able to do it the same way, but I can still do it.”

When he came into the program, he had never used a cane, braille or any special software, and Smith says learning these things has been an immense help in college. Although the program usually takes about a year, Smith was put on an accelerated version so that he could finish in time for Iowa State’s spring semester.

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Smith uses a braille watch to tell time without needing sight



Leland Smith, a legally blind sophomore, uses a cane to make his walks around campus easier.

FINDING A GOOD FIT

When he was looking at colleges, he wanted to find a school he liked that offered the major he wanted, just like anyone else, but he also wanted a place that gave accommodations and offered the student resources he needed to help him succeed.

“I wanted to actually meet up with [Student Disability Resources] and talk to them,” he says. “I knew I was going to be working with them throughout my whole college education, so I really wanted to make sure it was something I actually liked.”

Stevenson says that disabled students have more to consider when choosing colleges, but it’s still a similar process.

“They’re just like any other student in that they need to visit campus and they need to

feel like this can be home for them,” she says. “They have to be comfortable and excited by their choice of coming here and feel like it’s a good fit.”

After a couple visits and meeting with the disability resources team, Smith was sold.

Stevenson says that Student Disability resources works with disabled students in order to make getting around campus easier.

“We look at what their major is and what would be the closest to their classes,” she says. “We also can arrange it so that their classes are closer to each other, or that they get early registration so they can schedule enough time to get between classes.”



Smith takes notes in braille, using a slate and stylus to make impressions on notecards

ADJUSTING TO COLLEGE LIFE

Smith has gotten used to getting around campus using his cane, but he says it was a big change.

“I went from not walking around with a cane, to walking around with a cane all the time,” he says. “When it comes to seeing door numbers, that’s a little more difficult for me. I’ll usually walk in a building, find the floor and ask someone if they know where the room is.”

Although most rooms have Braille signage, Smith finds that it’s a lot faster to just ask around. During his training, he learned a balance between asking people for help and figuring it out himself. If he’s looking for a building on campus, he’ll set out in the direction of it, and ask people for help if necessary.

“I’ll never ask people to lead me there—that’s just too much,” he says. “I just ask them where it’s at, and the great thing about Iowa State is that there are so many people, I’ll always run into another person who can help.”

After a while, he started to memorize where things were, and getting around campus is getting easier by the day.

Not only did the Department for the Blind provide Smith with the confidence and skills to get around campus, they also gave him the expensive physical tools that help him succeed in classes.

Although he can write, he tends not to, as he says it’s tough for him to read his own handwriting. Thanks to more than 400 hours of intensive practice, he knows braille, and uses it for almost all classes. To take notes, Smith uses a slate and a stylus. He puts a notecard in the slate, which is like a template with cells for each character, and writes in braille, making indents with the stylus. Since he’s punching dots through the other side card, he has to write backwards, so that he can read the mirror image. The notecard can fit about a half of page of writing.

“It’s nice for taking quick notes in class,” he says. “In high school I wasn’t the best at taking notes, but this has been going pretty well.”

Along with the slate, Smith uses a machine that scans pages and reads them aloud to him, a more high tech Braille computer, a laptop with JAWS software and a different version of a slate that is built for larger paper.

Since he’s started using this equipment, his homework doesn’t take nearly as long—excluding some occasional technological issues, what takes most people half an hour will only take him about an extra five minutes.

Stevenson says that with more technology now, there are more ways to be creative and find solutions to problems.

“A lot of times it’s brainstorming,” she says. “I had a color blind student who was required

to do work distinguishing colors, and he had learned over the years that if he looked through his camera, he could see them.”

Smith has also gotten good at problem-solving.

“There’s always a way to do something,” he says. “If you want to be blind and successful you have to be creative.”

A few months before classes start, Stevenson will send out emails to professors notifying them if a student in their class has a visual impairment. After that, the professor and the student usually work things out together. Smith says he always talks to his professors the first week of classes to answer any questions they have and figure out any accommodations he’ll need. He says it’s important to be proactive in finding solutions.

Stevenson makes it clear that for visually impaired students, there isn’t a difference in course work—just how they get the information.

“Some students think that people with disabilities get an unfair advantage, but the students we work with have to meet the exact same standards as any other students,” she explains.

Smith is also a part of the Alliance for Disability Awareness (ADA) at Iowa State, which he says has helped him ask questions and get advice from other students with disabilities.

BEING “THAT BLIND KID”

“I’M STILL A NORMAL COLLEGE STUDENT.”

While he knows people who don’t tell anyone or talk about it, Smith is very open about his blindness.

“If someone stops and asks me, I’ll talk to them and explain what it’s like,” he says. “I’ll always introduce myself as blind, and a lot of people shy away from that. I always explain the difference between being blind and visually impaired to try to raise awareness.”

Stevenson remembers quite a few instances where students will try to forego special equipment to avoid people knowing that they’re blind—at their own risk.

“I hear from students that if they use their cane, people don’t approach them,” she says. “We have students who don’t use their cane sometimes because they want to be treated like everyone else. We especially see that with our high school students who come visit.”

Smith explains that a lot of people don’t know how to act when they meet a blind person, and while he understands why people wouldn’t want to use a cane, he doesn’t think it’s worth it.

“Before I used a cane, no one knew I was blind,” he says. “Now some people stare, but the benefits are so numerous that the little bit of social awkwardness really doesn’t matter.”

Using a cane is a pretty clear give-away of blindness, but Smith says that sometimes that’s a good thing.

“People know I’m blind, so if I stop and ask where Gilman is, and I’m standing outside

of Gilman, they’re not going to think I’m stupid,” he says.

A common misconception people have is that being blind means not being able to see anything—according to the Iowa Department for the Blind, around 80% of all blind people have some remaining vision. While they frustrate him, Smith uses these misunderstandings as an opportunity to have a little fun.

“Honestly, one of my favorite pastimes is messing with sighted people,” he says. “I’ll turn and stare at people as I’m walking by, and they’ll look around like ‘Is he really looking at me?’”

Smith says doing things like this, or pretending his “heightened senses” (another misconception) allow him to hear heartbeats, help to break stereotypes of blind people. After he talks to people for a while, they completely forget he’s blind—which is his ultimate goal when he meets new people.

Stevenson advises students to be willing to help out and assist visually impaired people if they need it, but also to see them as more than just their disability.

“Don’t identify them as ‘that blind kid,’ she says. “Find out who they are as a person—that doesn’t identify who they are.”

Smith agrees—he’s a lot more than just “that blind kid,” and he wants people to get to know him.

“I’m still a normal college student,” he says. “I want people to not see the cane, and just see me.”



Smith doesn’t allow his disability to limit his hobbies—he recently started longboarding around campus



When studying, Smith uses the zoom on his iPad’s camera to make his textbook easier to see