

Classroom Modifications For Students With Visual Impairments

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I teach math. What could depend on sight less than that? So, when I heard that I would have a student in my classroom who was totally blind, I was not the least bit worried. A student who is totally blind has to learn by using Braille or another non-visual means. (For the four categories of visual impairment and a little about each, you can go to the [Caring for Our People](#) page on visual impairment.)

I figure, I give my regular lectures, the student gets her books in Braille, I answer any questions – how hard can it be?

It was not hard, thanks in large part, I must admit, to the fact that my new student was very intelligent and very capable of asking specifically for what she needed. Her first request was a phone call weeks before the school year started.



"I need to get my textbooks on tape. Can you tell me which ones you are using for your classes?"

Well, fortunately, I already had those selected. That is not always the case. It can take four to six weeks to have a book tape recorded, so the teacher needs to have advance planning.

"Math is not my strong point, and you talk really fast. Is it okay with you if I tape your class?"

No problem. Then her third request came up: "A lot of times in class you write stuff on the board and then talk about what you have on the board and I can't see it. Can I get a copy of your notes in advance?"

Now, this seems a very reasonable request, but I began teaching statistics about the time fish crawled out of the ocean and began to walk on land. My notes are often along the lines of, "Explain normal equations." Or "Demonstrate matrix multiplication." This request took a LOT of my time, so much so that I spent extra hours working later at night and was annoyed that I

was taking all this extra time for one student.

After I had it done, I think I actually did a better job teaching because I was more organized and knew exactly where I was going in a lecture, had the problems all worked out in advance. Several other students began asking for notes for the next class. A few times, when we were covering a topic students often have problems with, I would distribute a copy of the notes to the whole class. If you have taught a subject for years, you have a good idea of where students will have difficulty understanding a new skill or idea.

Next, the young lady began raising her hand in class, "Dr. Rousey, you said, 'As you can clearly see on this graph,' but I can't see the graph on the board. Could you explain what it looks like?"

I had never realized how much I relied on visual aids in a classroom. I would draw a curve, point to the end of it and say, "Now you can see that there are very few people who fall at the tail end of the distribution." Now, I was forced to change my lectures and be more descriptive, "What does normal mean? Well, most people, 68% in fact, fall right in the middle, close to the average. In a 'normal distribution', the most common score is the average."

Nearly every class – no, make that every class – her hand would shoot up and a polite request begin with, "Dr. Rousey, I can't see, could you explain it to me?"

An important ability for the teacher is to have patience when working with visually impaired students. It did require me to be willing to stop and rephrase my explanations, to do more advance planning, have more materials, such as notes available. These modifications in my teaching helped all of the students in the classroom.

An important ability for the student is to be able to politely but firmly request that the teaching meet his or her needs. I never met this young woman's parents but they certainly did an incredible job teaching her that she was expected to learn everything that was taught, and it was her right and responsibility to make sure she understood the information.

A few more suggestions for students who are blind or low-vision.

Use Braille labels in setting up a classroom environment. Few teachers know Braille, but if your student or a resource teacher does, ask for Braille labels to be made to allow the student to get around and independently use the materials available. A terrific article, [101 Uses for Braille](#), is available courtesy of the National Federation of the Blind. Even people who have used Braille their whole lives will find some interesting ideas here.

Other alternatives are programs or scanners that speak aloud.

The student's workspace, as well as the classroom as a whole, should not be cluttered, as it is distracting for the student who is trying to decipher every item through touch.

Have only one student speak at a time, especially in a group environment, so that the visually impaired student can follow whose voice is whose.

At the beginning of the year, ask students to speak their name when they begin talking, so that the students who is visually impaired can learn to recognize their voices more quickly.

To help out students who have low vision:

- Printing text horizontally in large words is easier to read.
- Make sure the student has adequate light at his or her desk.
- Reduce glare, on the chalkboard, and on the student's desk.

Computer literacy is as essential as learning to read for students who are going to succeed in the year 2005 and beyond. Teachers must make sure that the computers are equipped with assistive technology appropriate for the student.

This may include a Braille printer or speech software, such as [JAWS](#) for persons who are blind, or [MAGIC](#) for those with low vision. A short discussion of this software can be found in this [press release](#) from the New York Public Library.

Increasingly, the JAWS software is being used by students with reading disabilities. In the future, it may be that computer literacy is even more important than reading. Yet, another example of how modifications in the classroom originally for students with visual impairments may come to add many of your other students as well.