

For my High School Robotics team I was the programming lead and as a part of my responsibilities I was to teach C++ to the rest of the programming team members. Each year I'd get a few members who were vaguely interested in learning C++ and I'd have to come up with lectures on different topics we can cover in order to expose them to key ideas. Normally I'd come in with either a good idea of what we'd be making or I'd make the programs beforehand and then rewrite them as a group so that they'd learn and be able to ask questions. I found myself learning quite a lot as I wrote the programs for the first time and as they encountered issues and I had to help them to resolve these issues I was induced to learn even more.

Although I learned C++ through reading a textbook I recognized that the rest of the members didn't have the time and attention span to do so this way. Which is why I chose the lesson format that I did. I think the biggest takeaway from me reading the textbook was that I would do all the examples from the textbook and type them in manually so by forcing the other students to do this it gave them the same exposure although unfortunately it didn't introduce to them the relevant vocabulary. The meetings occurred roughly daily after school and I gave them challenges to do at home if they wanted.

Although I think this model could be replicated by a computer, and many programs exist to do so. If the student is not sufficiently motivated and self-driven or find some joy in it they aren't as likely to succeed versus in the classroom where they have the added benefits of peer pressure, removal of distractions, and grades.

My choice of teaching was definitely biased. I chose C++, a language which is not a particularly popular choice for beginners and especially not popular in the education system. Further I would express my opinions on software engineering, code style, etc. on the students and thus they often would follow my lead in that. These biases would likely show up regardless of medium but I think being in person adds the pressure of being judged and I'm sure that I didn't remain as focused on the relevant content for example the textbook which I learned from so I also introduced biases about the internal politics of our school, team dynamics, etc.