

## Confessions of a science teacher

By [Worth Sharing](#) | Feb 7, 2017

“Choice of subjects to teach is not entirely involuntary in this school,” joked the veteran Physics teacher. We were discussing the possibility of my moving to High School to teach Physics and Math. Let it be known that I was formally trained to teach junior school and primary school children.



I was as much of a greenhorn as you could possibly find among teachers. My only credential for teaching science and math were my long forgotten transcripts from my undergraduate degree. My transcript showed that I had survived two years of serious math and science; the only visible damage was to my cumulative grade point average.

But, I did not go too far with my protestation about the lack of my competence to teach Physics. And the reason was not only that the school really needed a science and math teacher. It also had to do with my desire to engage with serious science again. Not to mention the ego trip it gave me. So, my career took another turn and I became a Physics teacher. I was to teach Physics for Class 9 and 10 and Math for Class 8. As one of my friends helpfully commented, “I can’t believe they have trusted you with three high school classes and an exam class at that!” I can assure you no public speaker felt more fear than I did on my first day of class. I was armed with my notes and my interest in teaching Physics. And the sinking feeling of what will I do if they ask me a question I don’t know the answer to; which was an all too likely possibility. And that I would make a fool of myself – so much for my ego trip!

But that did not happen. They asked me many questions that I could not answer well. Somehow, I did not come across as incompetent, though. So, I hear you ask, what happened? I am not sure, but I dare say all my misgivings came from an exaggerated sense of my importance. Of course, the teacher matters; but not in the way I had thought.

Then what is the role of a science teacher?

Well, I think the first thing to remember is that an opportunity to teach Physics means an opportunity to learn it well. And that is what I did. And I had a great time, learning Physics, without the stress of having to worry about what dent it would have on my grades. Of course, my students had to worry about all the good stuff like marks and exams. The next thing is that you need not have all the answers. I did not realize it when I started, but I think it would be quite a sad state of science teaching if you went in front of your class and said “Bring your questions on – here I am!”. At the end of one year of teaching, I still tie myself into knots on the seemingly simplest of topics before I go into a class but we have a good time in the class anyway. I think this is what happens. While I think I am confused, and in fact I am, what matters for the students is the level of engagement I have. And since I realize only too well how confusing things can be, in an almost bizarre way, I can make the class easier for them. And of course, the role of the Council in making Physics easy cannot be underestimated!



Another big “Aha” for me was this. No matter what I do, some topics will remain difficult and misunderstood. The DC motor is doomed, indeed, in school. This is not an indictment of the capabilities of the children; nor is it a license for me to goof off. It is just an “as-is” statement. There are several layers of understanding; unravelling and understanding again associated with any concept. And many Physics ideas remain in the lower levels of understanding for a long time. They remain there, till the student rediscovers her interest and explores it with a greater level of maturity, possibly as a teacher. And it is important to not take it too personally if Physics is not a favourite subject for many. This insight freed me tremendously from the pressure I was subjecting myself to – no pun intended.

Lest I sound like I have given up on teaching Physics in school, I must hasten to add this. How the teacher presents science in school has a direct effect on how the student views the subject later on. This is true, I am sure, of other subjects as well, but is critical for science and math. What matters is the teacher’s attitude and approach to learning and teaching. Of course, at least part of this statement is motivated by self-preservation interests. Regardless, I do think qualifications are not the only things that matter. And if I have done my job well, at least some of my students may revisit Physics later in life and grapple with concepts that they thought they had understood!

So, you think I have got it all figured out? You wish. I am supposed to teach Class 11 Physics next year. It is de ja vu all over again.....

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