

Dear members of the Education Committee,

I am writing in support of SB 962: The Middle School Curriculum.

My name is: Elizabeth W. Dillard

I teach in Tolland, CT

I teach at Tolland High School

I teach computer science.

To the best of my knowledge I am the only full time computer science teacher in a Connecticut public school.

I am certified in Math(7-12), Social Studies(7-12) and Business(7-12). I have 23 years of computer science experience in industry. I have an MBA with a concentration in MIS from Babson College plus additional coursework along the way. I have 5+ years of experience teaching computer science in Connecticut public schools. I'm in my 11th year as a public school teacher in Connecticut.

My school system has teachers assigned to teach computer skills in every school up to high school. After grammar school the courses are electives - and there are not enough teachers to handle more than a small percentage of the students.

My students therefore have basic mouse and keyboarding school if they have gone through our system. They've had a brief introduction to MS WORD and MS Power Point. But for the most part - that's it.

I teach 2 main tracks

Programming starting with my Cs Principles class, Prog 1 - VB, Programming 2 - JAVA, Senior Seminar (Their language choice)

Video broadcasting .. Just an intro class.

I large percentage of my students have significant issues with the following

- o Basic Internet search skills. This hurts their ability to research online programming texts. It hurts their research ability with all classes.
- o. File storage. Where is the file when I save it. Local drives, network drives, etc. They don't know how to organize their work in folders. They don't know how to back up their work. Sharing data/projects across members of a team.
- o. Use of alternative storage, Google drive, flash drives, passports, drop box.
- o. Organizational planning skills: pseudo coding, storyboards, outlines
- o. Operating system knowledge: how much space have I used, how much do I have, what capacity does my computer have to run processes. How do I tell?
- o. Interfacing with a interactive development environment or even a basic applications menu.

Some students have these through 6 week electives in middle school, in after school programs or summer programs. Bringing all of my students up to speed significantly delays my intro classes .. But I cover it. Consider that my class is an elective. Only 10% of my school even takes my class. Pity the rest of these kids when they get to AP classes and college. I'd like us to have basic requirements for computer skills at the end of each program: Grammar School, Middle School and High School.

Please consider also writing a bill for requirements in high school.

- Look at the deficit of applied math skills.
- How many of your associates can understand statistics beyond mean and mode when you are presenting statistical results.
- How many of your associates can use a computer to create the data analysis, graphing and statistical analysis necessary to support your bills? How often do you outsource this task and end up with useless analysis?
- Over my years in industry I spent a lot of time working with finance and investment divisions of companies. I even worked one summer with Connecticut's Office of Policy and Management back in 1988. I also worked for Bain and Company in Boston in their Information Technology department in the early 1980's. I have seen gaps across the board.
- These students will be working with computers in all industries. They need to be competitive. They need to be able to apply their Math, Social Science, English and Business Skills.

The bottom line is our students can't compete in the world today if we don't give them the skills.

- If they can't use the internet to research - they can't compete
- If they can't support their ideas with data using computer applications - they can't compete.
- They can't bring in a distributed team across the globe to work as a team if they don't know how to share data, and communicate via the web. They are limited to local solutions only. That's not enough.
- Engineers that can't use digital tools to imagine designs are stuck with static models that take too long to build and can't be modified. They won't be able to compete.
- Students that do not have family members in CS and Engineering tend not to choose it as a career, because they don't know what those careers are. Without CS and Engineering professionals we can't compete.
- I do not want to move from a first world country to a third world country in one generation. Please!! Get this done.

Thank you for your time,

Elizabeth Dillard
Computer Science Teacher
Tolland High School
One Eagle Hill, Tolland, CT 06084
(860)870-6818 x330