

# The importance of learning to code in elementary school

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Today, we live in a world where technology can be a necessity. It is all around us. We see it outside of our homes in a variety of places — schools now have interactive whiteboards and tablets, stores and malls have electronic advertisements everywhere, hospitals use advanced tools to cure patients, interactive devices are now installed in different means of public transportation, and restaurants are now beginning to initiate the use of touch-screen soda fountains and menus.

But do you ever wonder how exactly this technology is created? For the majority, it is done in just one simple word — coding.

Coding is essentially the basis of all technology. Today, the majority of our technological resources are built off of coding, including televisions, remote controls, wireless speakers, and modern kitchen appliances. Yes, your coffee machine was probably coded too! All computers are based off a code, which is a set of instructions for a computer to understand.

Learning to code can be as simple as learning how to write and speak in another language, but with this particular language, you can expand and create anything with it. You can go above and beyond with coding once you have mastered the skills.

There are a plethora of things that it can be used for, such as creating new applications for computers and smart phones, constructing new types of technology, building a website, maintaining a computer system for the military, recording

medical data and diagnostics, programming a robot, and many more.

The question is: should we implement this concept as an integral part of the curriculum into our public schools? Absolutely! It should be crucial

that we learn how to expand and work with the technologies used in each working field. Public schools should be introducing more courses that represent the skills in 21st century life and careers with various types of technology for students to learn and master before they enter college and the work force.

**Oakes will be a senior in high school.**



Right now, our schools are beginning to succeed in their goal of providing every student with his or her own laptop or tablet. Many schools have also purchased sets of laptops for the state's PARCC testing.

So now that our schools have the technology for student performance, then that means we should begin to instruct students on how to code now — specifically elementary school students.

The beginning steps of learning how to code are actually quite simple. In fact, the simplicity of it makes it possible for anybody to understand, even if that person is in first grade.

If we started teaching first graders on how to code, then they will become proficient in problem-solving and analyzing at a young age. Coding will enhance our children's thought processes, analytical skills, and methods for solving challenges, which will greatly improve their performance in school and careers as they get older.

However, we also know that technology is not constant, and that systems and devices will eventually become outdated

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and useless. The same concept applies to coding, but the process of how to code will remain the same forever. The students will already have the analytical skills, thought process, and methods by the time this new technology arrives, and they will already know how to execute a new code from experience. That's the beauty of coding — once you have acquired the skills in putting this "language" together, then you can use those skills to evolve your coding into a creation.

Thus, we are basically preparing our children for the world's possible future if we teach them how to code.

Not everybody uses coding as a tool for creation, as there are jobs where coding is used for communications and data systems. In the medical field, coding is used to transcribe all records of a patient. There are thousands of different codes used in medical coding, each representing a type of procedure and a part of the human anatomy. The information in these coded records is then abstracted for medical billing and claims for health insurance providers to pay.

Coding is also heavily used in the military. The U.S. Air Force is always searching to recruit people to enlist as Computer Programming Specialists. Computer Programming Specialists improve the military's war-fighting capabilities by writing and analyzing code for certain missions.

Of course, not everybody is interested in S.T.E.M. (Science, Technology, Engineering, and Mathematics), and many children typically do not know what career they would like to pursue, but those situations are pretty much irrelevant excuses for why somebody should not learn how to code. The methods of analyzing, problem-solving, and creativity that are used in coding can also be used in other applications, whether it is a simple mathematical problem, or a real-life challenge to improve society.

There are also many teenagers today that do not possess these traits because they are dependent on the technological resources around them to help them get through their classes. We have only learned the basics from the books in grammar school, rather than how to actually solve a problem. This is a huge problem for our society in the future if we are unable to reason and conceptualize a solution.

We will always expect today's children to become the future leaders of our society, and with technology usage rapidly increasing throughout the world, our children could be the next innovators and inventors to improve society with even more technological advancements. It is time to upgrade our schools to correspond with the possible new age. We need to educate our students to be creative problem-solvers to benefit society rather than only providing them with facts.

If we begin to teach elementary students to code now, then we can expect to see more students with bright and innovative young minds in the future.