How necessary is it to teach PROGRAMMING IN SCHOOLS?

SADMAN AHMED

Programming, or coding, is the building block of the technological revolution happening around the world right now. Because of this, as technology increasingly encapsulates our lives, programmers are well in demand. So much so, that industry experts and academics have pushed for the inclusion of programming in schools to prepare students for the fourth industrial revolution.

Some programmers start from an early age. Programming is said to be an art form, some have a natural ability to excel while others have to work towards it. And programming in the early years of school does have a lot of advantages. Starting programming while at school would grant early learners an edge over others, giving them the chance to either excel at it or learn the basic skills so that they can use it going forward.

Programming enthusiasts have also pointed towards the problem-solving skills developed due to programming. Programming requires a lot of mathematical and analytical abilities and the use of logic. This logical thinking process helps not only in programming but also in other professional fields, and even in daily life.

For some, programming is also about the sheer excitement of learning the inner mechanisms of the software everyone uses. For some, it is about developing something new.

Programming requires a lot of creativity and innovative thinking, and in turn, programming helps programmers to explore different possibilities.

On the other side of the coin, however, some academics are sceptical.

The biggest proponents of inclusion of programming in schools have been tech giants and the incentive here is quite transparent – building new engineers for their sake. For developing countries like ours, the intellectual motive has been to create new manpower to transform the current economy into a more digital one. While these missions are not inherently harmful, they still leave the question of whether programming in schools is an answer to all these problems.

Programming is not suited for many school students. Learning programming means learning a lot of things, and learning a whole new language is one of them. Programming also requires intensive thinking sessions, which is difficult for many in this particular age group. These might lead students to view programming as another boring and tough course, not something to be excited about. But programming does require a lot of motivation to keep going. Therefore, the inclusion of programming in school has a chance of discouraging some students from pursuing programming in the future.

While programming is one of the building blocks of the technological revolution, it is by no means the only one. Different professionals collaborate to develop a particular software or device, and each of them is important. Emphasising only one aspect of development discourages other activities that are similarly essential, such as writing, design or even management. And for critical thinking skills, other activities such as writing, reading, or extracurricular activities such as debating can be helpful too. It is true programming gives an edge to problem-solving skills and mathematics, but experts have opined that it should be the other way around. Problem-solving skills and mathematical abilities should be prioritised over programming because in general, they are more valuable. If they are learned only through programming, there is a chance students will miss out on the more vital skills such as problem-solving due to the emphasis on programming.

The bottom line is not to discourage students from learning programming, but its mandatory inclusion in schools. Programming is a valuable skill in the 21st century, there is no doubt about that. Programmers are indeed needed to transform the economy into a more digitalised one. But, at the same time, it shouldn't be viewed as the end-all-be-all solution without taking into account their effects in the long run. Programming is an art and it should be treated as such, pursued by students who are passionate about programming. Even if programming is included in schools, it shouldn't be mandatory and it is essential to let students grow in their fields at their own pace.

References:

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Sadman Ahmed Siam is a student at Islamic University of Technology.