

One new European language! Do you speak code?

Coding is the key to empowering Europe's young people, by enabling them to fully understand and shape the digital world around them.



Getting coding into Europe's classrooms matters. Not only does learning to code help students develop their broader creativity, flexibility and problem-solving skills, but it is also the key to Europe's future.

Computer science skills provide the basis for driving European economies and coding lies at the heart of major tech breakthroughs which now shape our everyday lives. And the benefits of computer science aren't just limited to the technology sector. Whether you're designing digital art, creating special effects for movies or developing healthcare apps, coding is written through Europe's future professions.

The new language of coding has practical value in the 21st century – it teaches us to be creators, and not just consumers, of technology. Europe's schools are lagging behind when it comes to coding in the curriculum. Few students have the opportunity to learn high-level ICT skills in the classroom. Teaching digital competences that are restricted to word-processing and creating

"In the 21st century, learning computer science is as foundational to a student's education as learning biology, chemistry, or physics."

Satya Nadella, CEO of Microsoft

presentations is no longer sufficient to help the next generation succeed in their future careers.

Policymakers across Europe are taking steps to tackle the absence of coding in schools; from the reform of national ICT curricula, to European Commission initiatives such as the Opening Up Education strategy on ways of stimulating learning through ICT, the eSkills for Jobs campaign to raise awareness of the need for citizens to improve their command of ICT skills for work, and the Grand Coalition for Digital Jobs, a multi-stakeholder partnership that facilitates collaboration among public and private actors to

attract young people into digital education. As a proud supporter of the European Commission's efforts to foster digital talent across Europe, and in partnership with European Schoolnet and Code.org, Microsoft has spearheaded an industry coalition to launch the European Coding Initiative: a pan-European coding platform providing teachers and students with coding resources and training. Working together, public and private actors can ensure that Europe's young people learn the skills in school which will prepare them for their future lives.

Coding in school

Less than 15% of European students have access in school to high-level ICT teaching.

Out of 12 EU countries which include coding in the curriculum, just 3 have compulsory coding lessons from primary school onwards.

Coding in the workplace

Two-thirds of ICT jobs exist in non-ICT industries.

The EU's app development workforce will grow from one million in 2013, to 2.6 million by 2016.

Recommendations

To fully equip Europe's young people for the digital age, Microsoft is presenting three concrete recommendations to European policymakers:

1. Promote the integration of computing curricula across European school systems, to incentivize youth to pursue computer science as a foundational skill;
2. Integrate higher-level ICT competence as part of the European framework on key competences for lifelong learning;
3. Support teachers with skills training and resources to enable their effective teaching of new curricula.



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Microsoft Coding Resources

Microsoft Imagine

Microsoft Imagine is a new hub for Microsoft's wide range of coding programs, which aims to equip aspiring student developers of all skill levels with the tools, resources, and experiences they need to turn their innovative ideas into reality. Take your first steps on a coding adventure at imagine.microsoft.com.

Hour of Code

Microsoft has fostered a broad partnership with Code.org and is a lead supporter of the "International Hour of Code" initiative, a movement encouraging students around the world to discover the excitement of coding in just one hour. In 2014, the "Hour of Code" reached over 8 million European youth across 33 countries, through resources such as Touch Develop, Kodu, and Microsoft Imagine. Take up the challenge at www.microsoft.com/hourofcode.

"The Hour of Code helps students discover the fun of coding and more importantly, how it can be a catalyst to create and achieve great things."

Satya Nadella, CEO of Microsoft.

Microsoft Kodu Game Lab

Kodu lets people with no coding background create games on the PC and Xbox via a simple visual programming language. Kodu can be used to teach creativity, problem-solving and storytelling, as well as programming. Anyone can use Kodu to make a game: young children as well as adults with no design or programming skills. 2.5 million students, teachers and young people have already tried it out - visit www.kodugamelab.com to get started.

Microsoft Small Basic

Making programming accessible and easy for beginners is the focus of this free software introducing students to real coding using a simple, easy-to-learn programming language. Visit www.smallbasic.com to learn more.

TouchDevelop

This resource lets you create apps on the iPad, iPhone, Android, PC, Mac or Windows Phone. Our touch-friendly editor makes coding fun, even on your phone or tablet! Check it out at www.touchdevelop.com.

Project Spark

Project Spark is a "game maker" video game for Microsoft Windows, Xbox 360 and Xbox One. It is special for its core ability to customize the games and let players tell more individual stories. Visit www.projectspark.com.

European AppCup

The European AppCup is a competition dedicated to start-ups and individuals who develop apps. The AppCup gives European students and youth an opportunity to compete with their own Windows apps in consumer, business or Microsoft CityNext categories. In 2014, over 250 SMEs and start-ups joined in to create their own business apps - find out more at www.appcup.eu.

Minecraft

The creative and building aspects of Minecraft allow players to build constructions out of textured cubes in a 3D procedurally generated world. A special version of Minecraft designed specifically for schools makes it easy for teachers to use Minecraft in the classroom, reaching students in a whole new way. Check it out at www.minecraft.net.



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