# Twenty years of the Bee-Bot: How a British invention helped children code around the world

*One rainy afternoon in 2004, a group of local authority ICT advisors and product creators from the renowned children's educational resources company TTS got together in Lewisham, South London, to devise a solution to a problem: early-years teachers wanted to prepare their students for a future in which technology was becoming increasingly important—but they didn't know how.*

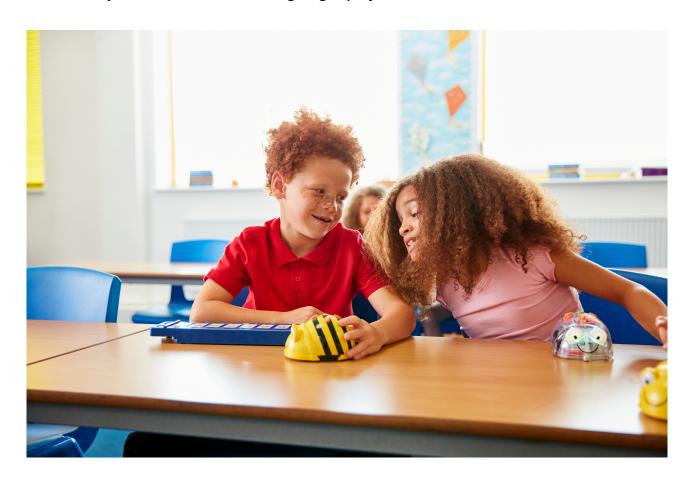Temps de lecture : minute

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After hours of poring over different ideas, the team finally came up with the design for an educational tool that could be both fun and informative for children. Little could the group have imagined that day the vast influence their 'Bee-Bot', as they later called it, would have on early-years education across the world for decades to come.

Exactly two decades later, this National Coding Week, the _Bee-Bot_ is still being used in 95% of primary schools across the UK and countries across five different continents. So why has the invention been so successful? And how has it kept up with the rapidly evolving technology of the 21st century?

## What is the Bee-Bot?

Bee-Bot is an educational robot developed by TTS that introduces young children to the basics of coding, programming, sequences, algorithms, and problem-solving in a fun, hands-on way. Children working alone or in

groups can press its buttons to deliver over 200 commands, prompting it to move across a surface to achieve goals set by teachers or parents.

Parents or teachers can also cover the surfaces they use with special mats that help the children learn the alphabet or countries of the world, for example. This helps children understand the foundations of computational thinking and introduces them to information relevant to other subjects like maths and geography.



## Why has the Bee-Bot remained relevant for so long?

Almost all primary schools in the UK use Bee-Bots, as well as classrooms across Europe, the Americas, Australasia, and Asia. From South Africa to Ukraine, Hong Kong to Turkey, the Bee-Bot has spread to almost every corner of Earth over the past 20 years. It has even been incorporated into

the national curricula of Chile and Greece – a testament to its universal applicability.

Technology has evolved a lot since 2004. The reason for the Bee-Bot's lasting relevance is that technologies developed today, like AI, remain based on some fundamental processes that it teaches. Anything that uses software, almost any technology today, requires code. And code is, in essence, a series of instructions that someone has given it, which is the concept that TTS based the Bee-Bot on.

Even as advanced generative AI platforms learn how to produce code themselves, the most recent analysis shows that these platforms will always need skilled humans to review and adapt the code and engineer the prompts that instruct the AI itself. For this reason, the skills that children develop in using the Bee-Bot prepare them for the future of technology, whatever form that may take.

Several studies have also analysed the Bee-Bot's use in helping students in specific scenarios. In 2022, _a Tallinn University research paper_ concluded that the tool could be especially effective in helping children with Autism Spectrum Disorders enhance their problem-solving, spatial awareness, and social skills, for example. _Another study_ in 2023 found that the Bee-Bot could also help Indigenous Māori and Pasifika students in New Zealand learn programming skills.

# Will Bee-Bot survive technology's most recent developments?

As AI continues to shape society and industry, we're yet to understand what new skills will be required in the tech jobs of the future. One thing is for sure though: coding will remain crucial. In fact, 97% of the highest-paying IT jobs in the UK _now require AI-related skills_, with coding being a fundamental component of that – whether it involves writing the AI's

software or reviewing the code that it produces.

> *So long as that remains true, the Bee-Bot will remain a vital, screen-free tool in teaching the fundamentals of coding to early-year students. Integrating this skill into the curriculum will prepare children for a future where technology plays a foundational role and could inspire the next generation of entrepreneurs.*



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Article écrit par Maddyness UK