Crafting lifelong knowledge and skills with MakerClub

As the digital revolution displaces long-established norms around education, career paths and working life, how can we identify and teach the skills most needed in the future? Simon Riley, MakerClub Founder and CEO, outlines how we can, and must, develop lifelong, relevant learning.

Temps de lecture : minute

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Educators today face a lot of challenges. The world is developing so rapidly that curricula struggle to keep pace. As programming and coding have become necessary skills for students, teachers have been tasked to quickly develop their own technical expertise. And yet, as jobs are increasingly automated by emerging technologies, there is a simultaneous need to identify and develop uniquely human skills.

These same challenges carry through to the world of work. The days of a job for life have passed for most, while the developing work landscape requires adaptable, tech-literate workers. Over 80% of UK companies believe a shortage of skills is harming the country's competitiveness. Around 40% of workers don't hold the expected qualifications for their jobs, while more than half lack the digital skills required for today's world of work, according to the Confederation of British Industry.

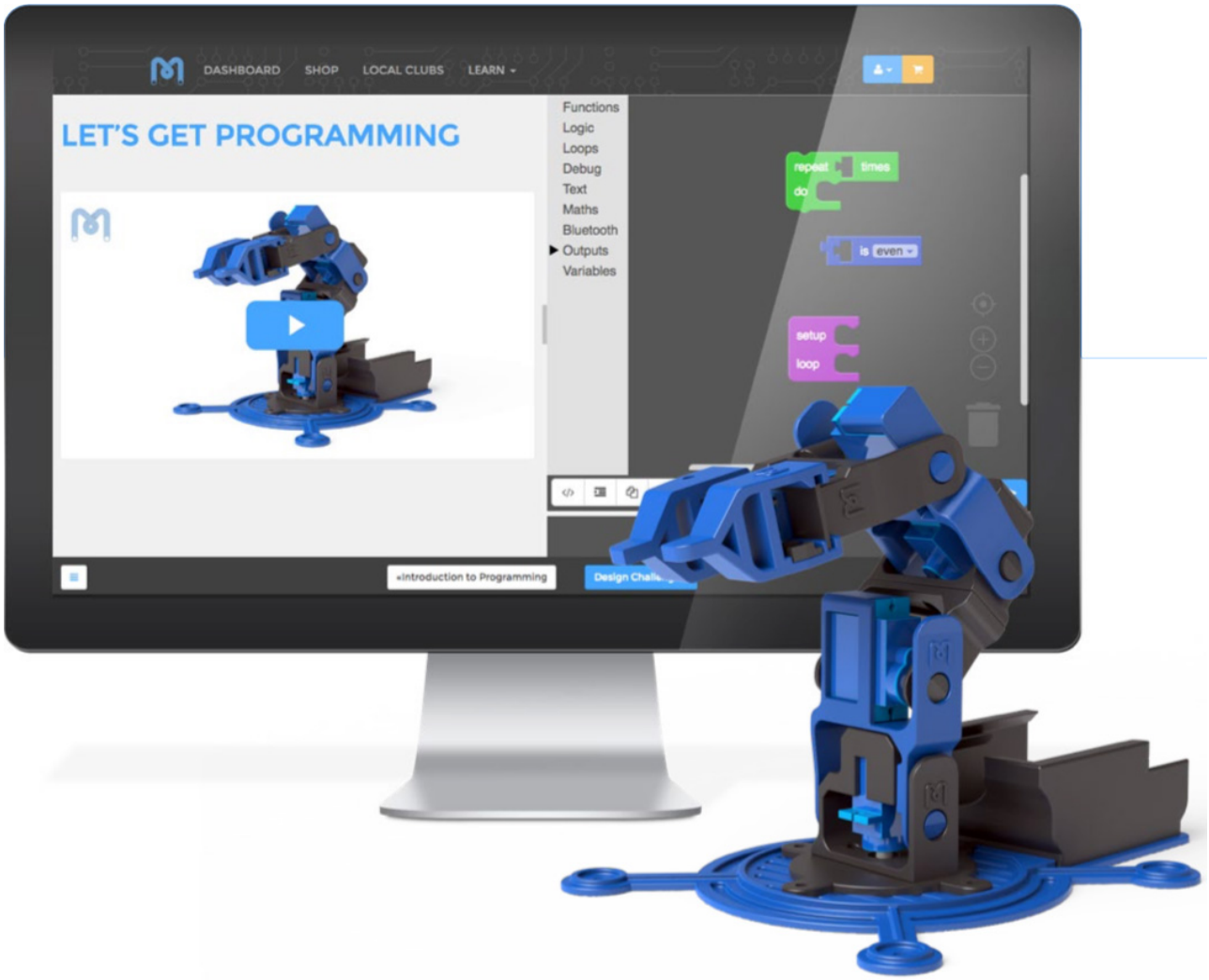
Getting creative with technology

This is where MakerClub looks to help. Founded by Simon Riley in 2013,

the startup works with schools and businesses to take bold new approaches in developing digital skills and encouraging creative thinking. Chances are, most of us reflect back on our time in school with mixed feelings (at best!). At least, not many will recall a burning desire to sit in class all day and absorb the information we were told we would need, if only to pass the next standardised assessment. In this respect, Simon was no exception:

> *“Throughout my education, though I couldn’t have put it into words at the time I felt a sense of unease. The teacher at the front, most kids sat bored, I felt like this couldn’t be the best way.”*

Thus came the inspiration for MakerClub. By encouraging children creatively, Simon wants to engage them in their own learning. Where a traditional programming curriculum might ask a child to learn to code a calculator, MakerClub would ask them to create a musical instrument, or study a 3D printed robot.



“Research overwhelmingly shows that sitting and listening to prepare for an exam is not the best way to learn” Simon says.

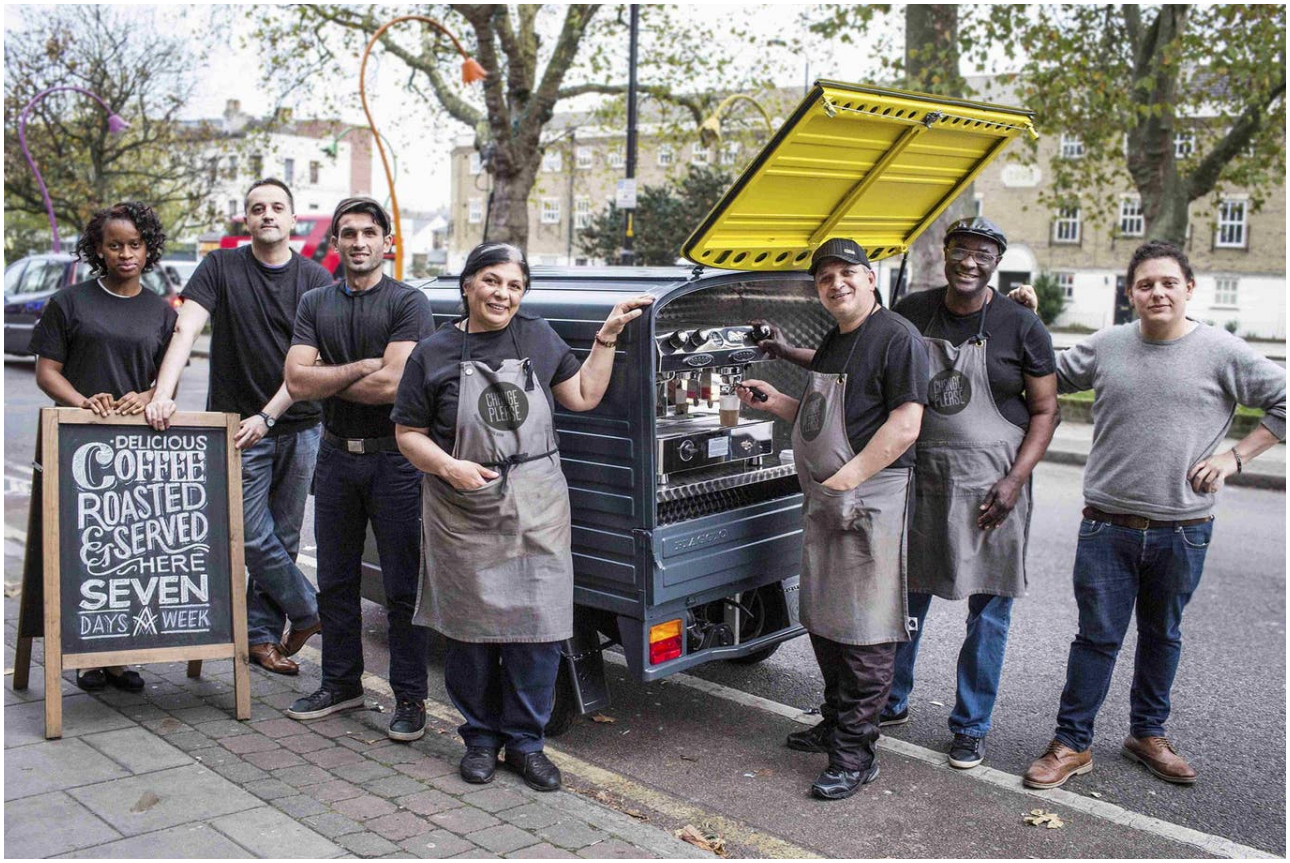
> *“When you learn through making, and through experiencing, you’re much more likely to retain that knowledge”*

While establishing a more innovative pedagogical approach generally, MakerClub is especially focused on teaching tech. Technology education faces a unique obstacle: while the rules of mathematics and the syntax of the English language remain largely constant, technology certainly

doesn’t.

“There’s an inevitable lag to the system. For a teacher to teach IT at primary, a policymaker has to make a decision. A curriculum has to be set, and then agreed, and then distributed, and then learned by teachers. This can take a number of years, by which time the original decision is out of date.” MakerClub sees that technological problems often call for technological solutions. “We wanted to build a digital platform with all the relevant knowledge contained within it. Teachers can then facilitate and scaffold that learning, without the need to become programming experts overnight.”

By leading their own learning, applying it to a project and building something tangible as a result, children strengthen their understanding and build vital skills which remain relevant through working life, where evidence of past success will often carry more weight than a purely academic qualification.



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The value of lifelong learning

How, then, can these ideas be applied to a lifelong learning approach? With the onset of emerging technologies, jobs of the past are being delegated to machines and algorithms, while new positions arise demanding ever newer areas of knowledge and skill.

Indeed, when Simon raised the importance of creativity, ownership and flexibility in children's education, companies felt that their employees could benefit from a focus on these same skills.

MakerClub now works directly with a range of companies to help foster innovation and adaptation to the developing automation landscape.

> *"There's a need to focus on what humans are still best at"*

"Collaborative problem solving, thinking across domains for example. It's difficult to program a computer to understand, say, the relationship between agriculture and the economy."

While emerging technologies pose a threat to many professions, they also create opportunity - both for individuals to undertake more creative, decisive work and to develop hard skills required to develop them, such as programming and 3D design.

“The adoption of a growth mindset is very important. There’s a stronger need now to be able to change - both because there’s more of an expectation for workers to change jobs more frequently today, but also to facilitate change within large organisations.”

Larger companies have often been resistant to change, particularly in comparison to startups. A smaller scale grants more flexibility and capacity for failure, whereas established companies often build their reputations around consistency while needing to build broad consensus to take risks.

MakerClub takes a two-pronged approach to growing innovation within large organisations: both identifying early proponents of change within a company to work with in depth, and taking a much broader approach via workshops involving the whole organisation.

“One approach for big businesses is to speak to clients transparently: suggest a new approach, emphasise that it’s untested while stressing how much more efficient or cheap you think it will be and asking them if they’d like to give it a try. Another is working openness to change into the core company culture - which of course takes longer.

In the past big companies have often been complacent about change, but there’s a growing realisation now that digital transformation is very much on the rise.”

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Planning for the future

Despite a tumultuous backdrop, Simon sees plenty of reason to be optimistic about the future of lifelong education.

“It’s often been said that the world has changed drastically over the past 100 years and yet the only change in education has been the blackboard becoming a whiteboard. That’s definitely changing now and things are moving in the right direction.

Of course, the issue of money often raises its head - as with anything change, particularly technological change, requires a level of investment and schools don’t have huge amounts of money. For us, we want to help

corporates innovate and change, enable them to look after the workforce while ensuring that the skills being imparted will be useful for the future. That work helps us to subsidise our work with schools that want to change too.”

As VR, AR, AI, blockchain and the Internet of Things continue to expand exponentially, none can predict what hard skills will be in demand when children beginning their education today graduate into adulthood. However an ability to learn, adapt and grow, regardless of changing surroundings and norms, will never go out of date.

Article écrit par Max Wood