Case Study: Islington Council Primary Schools put Agility into Education

London's Islington Council is 'passionate about supporting children and young people to have the best start in life.' They focus on computing and STEM learning, to build skills for a fast-changing world and create a generation of agile thinkers.

25 years
1994 - 2019

Agile Business Consortium

Islington Council strives to prepare children to take their place in a technological world that is constantly evolving. This has led to the Council's focus on computing and STEM (Science, Technology, Engineering and Mathematics) learning, giving children the opportunity to build skills for a fast-changing world and create a generation of agile thinkers. The children that will become #GenerationAgile.

Key points

Challenges:

- Educating to build skills alongside knowledge
- Giving space and opportunity for learning by doing
- Opening young minds to real life challenges
- Closing the gap between educators and industry
- Teaching skills for the workplaces of the future

Results:

- Use of agile principles and practices in education
- Hackathons, Scrum and student-led learning opportunities
- Tinkering and experimentation encouraged
- Challenges, projects and goals given to students
- Annual Computing Celebration at the Emirates Stadium

Education for a Changing Workplace

Nearly twenty years ago, Katy Potts was appointed as champion for Computing and Online Safety for Islington Council, and works with almost 50 primary schools. She explains, 'Education isn't only about knowledge anymore as this is readily available online. What children will need to thrive in the workplace are skills such as problem solving, agile thinking and resilience to survive amidst constant change.'

For Islington Council Schools, teaching computational thinking and Project Based Learning (PBL) are key. 'We make best use of all the resources at our disposal,' says Katy, 'We use a wide range of free resources, including codeclub.org, appsforgood.org and barefootcomputing.com which support creativity, problem solving and digital skills. We also have partnerships with a wide range of organisations such as Microsoft, BT and Google. Our challenge is to give Islington children real life experience, to allow them to learn by doing, and make the connections that bring real purpose to learning.'

Islington schools all subscribe to a service agreement that demonstrates their strong commitment to this style of education and learning, which is typically delivered through focus days and sessions that are built into the standard timetable.

Practical Solutions for Learning

Katy emphasises the value of educational approaches such as PBL which give children the chance to solve real problems and produce results that have tangible value. 'Predictions about the skills needed for the workforce of the future increasingly identify problem solving ability as a foundational skill,' Katy emphasises. 'We aim to bring purpose to learning, so that children understand the "why" behind the theory, bringing traditional fact-based education to life and giving it relevance.

Image - School hackathon, courtesy of Innovation and Integration

'Computational thinking is a fundamental skill that teaches children to work through and explore problems logically and algorithmically. Learning should be hands-on, concrete and applied to real life. To achieve that we need live connections with the world of work, which we get from STEM Ambassadors who give their time and energy freely to help demonstrate how Science, Technology, Engineering and Mathematics (STEM) abilities offer practical value to industry.

Sharing Student Success

'People generally need a purpose if they are to finish things. They need an audience, and feedback – an opportunity to both give and share.' To give this to children, Islington's Computing Service presents an annual Computing Celebration at the Emirates Stadium. The 6th event in 2018 saw over 500 children from 45 primary schools showcasing their digital projects. More than 25 tech industry leaders including Google, Microsoft and the Institute of Imagination also attended the event, exhibiting the latest developments in education technology.

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- Katy Potts

Agility in the Classroom

Aga Gajownik is a STEM Ambassador, passionate about educating for the workplace, and highly involved in the programme. 'We need to champion an agile approach to learning,' she suggests. 'Learning by doing, and an experiential approach to learning is closely aligned to agile techniques and agile values.

'For many children, it's difficult to focus in a traditional "chalk and talk" classroom environment. Their brains are used to heavy stimulus from multiple electronic devices and exposure to rich media material that engages multiple areas of the brain. Research has shown that simply handing over knowledge and leaving it to the child to internalise this, to paraphrase in exams, just doesn't work. What the workforce of the future will need are skills such as being able to collaborate effectively, inspire and motivate oneself and others, and retain a calm head when overwhelmed by change. Educating for the future requires new and appropriate tools, and agile techniques are an important part of that.

'I use Scrum and hackathons to help children work as a team, learn to focus on one thing at a time, to complete a task before starting another, and evaluate their work through a retrospective approach. This review phase is critical for moving the subconscious learning, that comes from gamification and experience-based approaches, to the conscious mind. The retrospective makes the learning sustainable. Agile has an important and evolving role in education, and I value how the Agile Business Consortium's Generation Agile initiative is supporting this.'

Real Results

Demi Cornell is a STEM Ambassador Coordinator for North London. 'Aga is an amazing role model for the children,' she comments. According to the UNESCO Institute for Statistics data, less than 30% of the world's researchers are women and the Computing Celebration initiative gives all children a chance to develop and apply technological thinking. 'This is a great way of learning,' says Demi. 'Children learn to take their place in a team, and they get involved with some really cool things. They develop robots, drones and game simulations – one group even designed a smart fridge.'

Agile principles focus on learning by doing, empowering teams to both take decisions and influence outcomes. Applying this to education leads to a process of learning that is critically student-led, and fosters the collaboration and communication skills that will set children up to thrive in the workplace. They learn to understand challenges and problem solve through exploration and experimentation.

Praising the work of Aga and her team, Katy Potts stresses, 'Children have to learn to tinker. When Aga is giving them the chance to tackle Project Based Learning, they have to accept mistakes. It won't be right first time and they learn the resilience to continue; to tinker until they have something that works.'

This is how children can learn the elements of agile working – breaking tasks into increments and being prepared to iterate to improve, collaboratively, responsively and adaptively. These are the fundamental skills that Generation Agile will need to flourish in the working environment of the future.

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Aga Gajownik - © Felipe Diehl Photography | felipediehl.com

How to find out more:

Islington Digital and Computing Strategy

Islington Council works closely with technology and education organisations including BT, Microsoft, Twitter, BBC, Barefoot, Safer Internet Centre, and others.

Regular events take place for pupils to showcase their digital projects (from class, code clubs and home) providing a platform to celebrate learning and achievements, and to collaborate with peers and industry.

digileaders.com/islington-digital-and-computing-strategy-for-schools-and-families/

STEM Ambassadors

STEM Ambassadors are volunteers from a wide range of science, technology, engineering and mathematics (STEM) related jobs and disciplines across the UK. They offer their time and enthusiasm to help bring STEM subjects to life and demonstrate the value of them for life and careers. STEM Ambassadors are an important resource for teachers and others engaging with young people in and out of the classroom.

stem.org.uk/stem-ambassadors

Scrum Educational Experience (SEE)

Innovation and Integration offers a range of school hackathons as well as training for teachers and event facilitators. Their goal is to bring this mini-hackathon technique to a wider audience, providing more opportunities for young people to learn by doing within the education system.

iandi.eu/scrum-educational-experience

Generation Agile

The Agile Business Consortium is calling for the inclusion of agility and agile skills in the education of everyone from primary school children, to working professionals.

Current education curricula are not equipping the workers of today or tomorrow to be flexible and adaptable, so businesses will not have access to the employees they need to compete and thrive.

It is our collective duty to bring about Generation Agile.

agilebusiness.org/generationagile

Agile Business Consortium:

The Agile Business Consortium is the not-for-profit professional body for business agility, and we are now in our 25th year. Our mission is to lead, promote and enable business agility worldwide.

We are the brains behind AgilePM®, AgileBA®, AgilePgM® and AgileDS™. Through APMG International we have certified over 100,000 Agile Project Managers around the globe. We are the world's oldest agile organisation and organisers of the world's longest running Agile Business Conference.

Learn more about business agility and the Consortium at: www.agilebusiness.org

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