Opinion piece by Annie Fogarty – *The West Australian*

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Coding vital for youth to thrive in the future

The importance of STEM - science, technology, engineering and maths - to our future productivity is being recognised by our politicians, educators and businesses. But if we are to be a "smart country", we need to ensure our young people are learning the skills to take advantage of the opportunities of the future. One of these skills is digital literacy, inclusive of coding or computer programming.

Like reading, writing and maths, coding is an enabler. There is a world-wide shortage of computer programmers, but coding is not just for programmers. Digital disruption is changing the nature of many occupations and strong technical capabilities are increasingly being required in many roles that had not previously been associated with traditional IT positions. Nearly every occupation will benefit from some knowledge of coding, particularly in the use and evaluation of data.

We all need to learn how to write but most of us will not be writers – it is an enabler, a skill we need to be able to learn, create and communicate. So too, digital literacy is an enabler in our rapidly accelerating digital world.

 A number of countries including Estonia, Vietnam and recently Britain, have coding as core part of their school curriculum, so that when every child starts school at age five, they learn how to code.

A grassroots initiative engaging young people in coding is CoderDojo. Four years ago, a teenager in Ireland set up the first CoderDojo – "dojo" from the Japanese term for "temple of learning". A CoderDojo is a fun, out-of-school workshop session that enables young people – "ninjas" or 7-17 year olds - to learn how to code and program computers through self-discovery. There are now more 740 Dojos in 59 countries.

CoderDojos are run free by a network of enthusiastic champions (co-ordinators) and mentors. Resources are collated from free online providers including Codecademy, Scratch and Code.org. CoderDojo has one rule – above all, be cool. They are a place for learning, connecting and sharing, and helping them to not just be consumers of technology, but also creators of technology.

A benefit of the informal and fun nature of CoderDojo is ninjas often evolve into mentors themselves – ideas are shared and information spread. Parents are welcome to stay and learn, so that knowledge can be built at all levels.

In addition to developing digital literacy, CoderDojo also helps develop other skills necessary for the 21st century including, self-discovery, peer-to-peer learning, creativity and innovation and communicating your ideas with others.

The Dojos are also helping to build a coding community in WA with mentors learning new skills, sharing their knowledge with the next generation and connecting with other likeminded people. WA has some endeavours of a global scale such as the Square Kilometre Array and the Pawsey supercomputer that require significant digital skills, and WA businesses are needing to employ people from overseas to meet their ICT needs. This, combined with the belief that every young person in the future will benefit from some knowledge of coding, the Fogarty Foundation set up CoderDojoWA in June 2013.

There are currently twelve dojos in WA - at universities, schools, community centres and one corporate dojo. More than 1000 ninjas have taken part in the dojos, with more than 150 mentors involved.

CoderDojoWA set up and ran the first two dojos in WA and provides support for people to start dojos and to grow a digitally literate community. They do this through providing help on how to start a dojo, enrolments, training of champions and mentors, online workshops and special events such as the Project Awards.

There is the ability for all sectors in our community to be involved, within the education system, with more corporate engagement and extending the dojos to regional WA, so that every child can have the chance to learn to code and take part in our digital world.

Annie Fogarty is executive chairwoman of the Fogarty Foundation.