

COLLABORATING WITH BUSINESS

by academics in Arts, Humanities and Social Sciences

The Learning Scientist using tech to add magic to education

Teacher turned researcher and education technology entrepreneur, Dr Andrew Manches believes the academic community must work more with industry to ensure EdTech lives up to its potential.

Estimates suggest global sales of 'EdTech' products will reach **\$342 billion by 2025**. However, the idea of technology in schools is still controversial. Critics argue tools such as tablets and smartboards are a distraction from the fundamentals of teaching.

Teacher turned Learning Scientist, Dr Andrew Manches says some of the debate around these new technologies comes down to educationalists' mistrust of the private sector. "EdTech is still seen as the enemy by many researchers, who are suspicious of big names, such as Google, commercialising education", he suggests.

Together with funding shortages, this may explain why globally, less than 3% of education expenditure goes towards digital resources. However, Andrew is optimistic. "Whether we like it or not, private tech providers are playing an even greater role in the way children learn", he says. "With this shift comes an enormous opportunity to make learning more accessible, fun and engaging. The educationalist community must engage with EdTech companies to ensure these technologies live up to their potential."



Andrew has used his research to develop two EdTech products. The **Magic Cloud** wirelessly brings soft toys to life through on-screen stories and songs which inspire children and encourage vital skills such as listening and reading. Meanwhile, **Numbuko** - a set of magnetic blocks which change colour when snapped together or taken apart - gives young children an innovative new way to learn about numbers, from counting to fractions.

Andrew's journey to EdTech entrepreneur began in 2009 when he joined the PhD programme at the University of Nottingham's Learning Science Research Institute. "After close to a decade as a special education and infant teacher observing these new technologies, I suddenly found myself in the heart of their development", he recalls. "It was a very interdisciplinary space where I had an opportunity to swap ideas with designers, psychologists, computer scientists and even magicians. As someone with no formal design training, the experience gave me the confidence to play with new ideas."

Despite his passion for supporting children's learning, he says some people are still sceptical



about his commercial ambitions. “The vast majority of researchers believe in making a difference, but until recently, academic culture has focused mainly on publishing as a means to achieve this”, he argues. “Since I began working on Magic Cloud, the impact agenda has focused attention on the value of going out into the world and sharing your ideas in novel ways. Funders and publishers have also started to recognise the value of impact. I understand there may be ethical concerns which still deter some academics from engaging with industry. Still, for me, there is no substitute for connecting with the people you want to benefit.”

Andrew has also applied his commercial experience as the lead UK partner in the international **Move2Lean** research collaboration. “My colleagues and I with our partners in the US are working on ways to apply academic insights to interactive exhibits and even new board games which can help children engage with science”, he notes. “As well as the educational impact, this could become a new source of revenue for my School.”

Andrew says his next challenge is to balance giving his company the time it needs to grow while maintaining the academic career, which has allowed him to explore his research passions. “The University has been very supportive and has even taken a stake in the company. However, we’re still in the early days of finding workable routes which allow room for long-term projects outside of research and teaching” he says. “The **Knowledge Exchange and Impact** team has helped me find creative ways to balance my commitments. In the future, I hope I can make my academic and entrepreneurial life work together in a mutually beneficial and sustainable way.”

He has just one piece of advice for other academics interested in finding new audiences and industrial applications for their work. “Fake it until you make it. You will always feel the symptoms of imposter syndrome, and not everything will go the way you expect. However, you have to go out there and give it a go. Creating things helps to engage people in your work, which can only help your research in the long run.”



Developed in collaboration by:

