

Using tech to save the planet

Hazel Davis finds out how edtech can be used
to help solve the sustainability conundrum →



Sustainability is a hot topic in the education sector. Above all else, people and institutions are looking to save money and meet increasingly pressing green targets.

This year we're likely to see increased mobile technology and virtual reality starting to have an impact on things like food choices. Technology Enabled Care Services' (TECS) carbon footprint software allows institutions to calculate the carbon footprint of food; while MOOC learning software enables users to see how buildings are performing energy-wise.

Any institution not using tech to save energy and money these days is a rarity.

But it's not always as easy as it seems.

"The main sustainability challenge for UK universities this year is definitely how they are going to rapidly cut their greenhouse gas emissions and reach net zero targets," says Iain Patton, CEO at the alliance for sustainability leadership in education (EAUC). "There is no doubt education technology will need to play a role in this. Universities must ensure they are maximising the use of edtech to decrease emissions where possible (by saving on travel, for example), as well as encouraging students and staff to come up with innovative new

“Our ultimate ambition is to make zero-emission shared transport a reality for schools and universities”

edtech to further help society decrease its emissions.”

There have been some landmark achievements in the last 12 months. The Green Gown Awards recognise exceptional sustainability initiatives undertaken by universities and colleges across the world. Last year's highlights included the University of Bristol's Sustainable Futures online course. This free programme uses real-life video case studies of people making a difference in diverse ways. So far, 5,700 people have undertaken the course, including 2,000 students, and feedback has shown it has motivated many to become more sustainable.

The University of Edinburgh developed its Digital Ambassadors scheme to boost digital literacy in Edinburgh, as well as to empower those who lack the skills needed to undertake tasks like online food shopping, or keeping in touch with family by email. This is hugely beneficial to the health and wellbeing of those receiving help and support.

One of the finalists in the Green Gown 'Research with impact: student' category developed a tool designed to calculate the carbon sequestration of an individual tree (which means you can calculate how

much carbon capture a development will cost if it involves the cutting of trees); while another created an interactive online wellbeing map that gives a comprehensive guide to campus wellbeing facilities.

The University of the West of Scotland's (UWS) Lanarkshire campus, designed around sustainability, is one of the greenest in the UK. Powered by 100% renewable energy from a nearby windfarm, the campus has flexible and collaborative teaching areas, some of which are available for use by the local community and businesses to ensure no space is wasted.

JOURNEYING TO NET ZERO

Mathew Hassell is the CEO and founder of education transport management provider Kura, which helps education institutions be more sustainable by overhauling their transport operations, using powerful tracking and app technologies to provide a safer, greener and more intelligent school run service.

"Currently, around 25% of peak-time car usage is associated with the school run, with just 20% of students making use of shared transport," says Hassell. "Our innovative, technology-driven services encourage greater uptake of shared transport amongst

students, by improving safety, efficiency and reliability."

Every 49-seater coach takes up to 31 cars off the road, so by working with schools to make their home-to-school transport services more user-friendly, Kura is able to make a huge difference to air pollution levels.

In addition to reducing the number of cars, Kura

also encourages education establishments to optimise their shared transport routes, further cutting down unnecessary carbon emissions. "We're finding that educational establishments are now looking to the future a lot more, and, as a result, are interested in agreeing longer contracts where this will directly lead to greater improvements in sustainability," says Hassell.

But Kura's work is not yet done: "While we have been making some really great progress within the education sector, our ultimate ambition is to make zero-emission shared transport a reality for schools and universities," says Hassell. "We know that moving from traditionally fuelled vehicles to electric buses holds the key to this ambition. Unfortunately, the charging infrastructure to support this move is currently not there, as electric buses have different power requirements to conventional electric vehicles and cannot rely on existing charging infrastructure. This is further complicated by the need for coach operators to be able to run their vehicles on longer journeys between school services in order to make a return on the considerable investment an electric vehicle requires."

Kura is now in the process of establishing its own



network of bus-charging points across the country, working towards a national infrastructure that could be used by other fleets of electric buses.

SUSTAINABILITY ISN'T ALWAYS OBVIOUS

Vevox, formerly known as Meetoo, is a Hampshire-based engagement app company. The company develops a polling and discussion app that increases engagement and participation in meetings and classes, or at conferences and events. Managing director Pete Eyre says that apps like this are a simple way for institutions to streamline. “Many institutions are operating on outdated legacy systems,” says Eyre, “and this sort of tech offers universities an opportunity to keep students engaged through modern solutions that can be easily integrated into existing IT systems and processes.” He adds that, “choosing an outsourced solution means institutions don’t need to spend extra costs and resources developing their own systems. All of this makes for a much more sustainable and flexible long-term investment option.”

There is an economy of scale with modern edtech too, says Eyre, particularly with the advent of cloud-based platforms: “A feature-added based on the requirements of one higher education institution can immediately be available and of benefit to all institutions using that platform... In the past, software licensing meant installing increasingly outdated versions or, where

in-house software was used, institutions being faced with the cost of developing a feature in them alone.”

FUTURE-PLANNING

While solutions that review energy use or encourage recycling are great, Clare McSheaffrey, head of marketing and events at CoSector, University of London, believes that “if the sector is going to truly make a difference, there are some much more advanced approaches which could be adopted in years to come”.

Paperless processes are already in place in some areas of HE, says McSheaffrey, “such as essays which can be submitted by VLE tools such as Turnitin, rather than physical copies. Recent advancements in digital assessment could see us take this even further. Moving examinations completely online, we could see a huge reduction in paper used by universities, not to mention huge efficiencies and time savings when it comes to collecting and marking.”

Though there are plenty of good-news stories, there are still challenges, says Iain Patton: “There are some common stumbling blocks – quite often an institution might encourage a sustainable behaviour change, but lack the infrastructure to support it.” The key, he says, “is balancing the social side of sustainability with the economic and environmental side, and learning from mistakes.” **ET**