Unlocking the doors to education for prisoners

Philip J Heron

hopes that a pilot course teaching astronomy and geophysics in prisons can be expanded.

Education and employment have been highlighted by the Ministry of Justice (2013) as key points in reducing reoffending rates. However, there is a lack of science and health education in prisons despite an apparent appetite to learn among prisoners. The outreach project Think Like A Scientist attempts to address this by bringing more astronomy and geoscience to prison education. Now that we have conducted the course at two prison facilities in England, we are looking to expand and collaborate more with the astronomy and geoscience community.

Think Like A Scientist is a seven-week course designed to improve critical thinking and encourage independent thought. Short, impactful lectures cover geophysics, astronomy, the science of sleep, climate change and artificial intelligence. Teaching methods based on dialogue and guided by a framework of critical thinking help students learn to analyse current research, which builds confidence both in education and in themselves.

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For the geoscience modules, students are asked what they know about the Earth: What lies below our feet? How do mountains form? From here, the class explores what they do not know, asking questions and trying to fill in the gaps. They are taught about plate tectonics alongside an overview of volcanic eruptions and seismic waves. By discussing slow processes taking place over long timescales, they begin to understand the history of the Earth.

Space: history and future

Space forms an integral part of the course, with students often searching for the extremes of what we know about the universe. A history of space missions is discussed with a look to the future – students produce a blueprint for a colony on another planet. One homework asks them to write an email home from the exploration station on Mars where they were conducting science experiments (an exercise developed from Charles Cockell's book *Life Beyond – From Prison to Mars*; Cockell 2018a, see also Cockell 2018b). The result was a mix of science and art, expanding students' understanding and communication skills.

Feedback forms are given out in class to assess its impact. All respondents across the different prisons said they "learned a lot" and "would take it again". One student said: "I am gaining a sense of confidence, academically, I never thought I had in me."

Think Like A Scientist received outreach funding from the British Geophysical Association (BGA) to develop the course. A portion of the BGA fund was used to set up a conference with charity the Prisoners' Education Trust: the "Prison Education and STEM Symposium" explored the innovation, challenges and opportunities in science teaching in prison, allowing outreach professionals, prison staff and STEM academics to pool their expertise. There are several STEM activities in prison education but, despite often similar goals, objectives and teaching methods, work is often conducted separately. The conference brought the community together, with talks given by (among others): Code 4000, an initiative teaching prisoners coding skills; Cell Block Science, a pioneering science education programme for prisons; BounceBack, who talked about their RAS200 project to bring astronomy into prisons; and Space is the Place, a science radio show on National Prison Radio.

Dalton Harrison, an alumnus of Think Like A Scientist, spoke at the symposium about the role of education in prison, saying "Education is the only thing in prison that gives you any form of self-worth or purpose" and highlighting the importance of science education in particular: "Science is important as it shows a world we haven't seen before, gives us knowledge of the life around us. Science educators are showing us failure is just as important as succeeding, and that science is a lot of 'no's to a lot of questions – but that is OK!"

Teaching in prison is difficult, but not impossible. Think Like A Scientist and other prison education projects can break down barriers and make an impact once students get to the classroom. Funding bodies demand that academics carry out science and outreach programmes with impact – is it time to expand our portfolio beyond classrooms and science fairs?

In a wider sense, the chasm between education and employment needs to be bridged in order for prisoners to return to society successfully. What could astronomy and geophysical companies do to help people in prison working towards employment in science-based occupations? One step would be for their hiring policy to include former prisoners. Another would be to collaborate with initiatives such as those mentioned above in their quest to help students in prison build confidence in their academic ability – and help to unlock the door to a brighter future for all. ●

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MORE INFORMATION

More information can be found at philheron.com/ThinkLikeAScientist

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