'A Mathematician's Holiday': an engaging podcast series for schools

Reaching out to schools on a larger scale

Mathematics often has the reputation among secondary-school students of being irrelevant and removed from their day-to-day realities. Marcus' Marvellous Mathemagicians is a group of maths students, junior research fellows and post-doctoral researchers at the University of Oxford that sets out to tackle such misconceptions. As its name suggests, the group is championed by Professor Marcus du Sautoy, Simonyi Professor for the Public Understanding of Science.



Passionate to inspire others about the great value and versatility of maths, the Mathemagicians run a range of activities including mathematical walking tours, workshops and international visits to schools. However, they struggle to get to all the schools that request a visit.

To overcome this logistical problem, they decided to share their work by creating video podcasts structured around a series of activities explaining different mathematical concepts. The videos were intended for teachers and students who were interested in finding out more about mathematics, by providing interesting examples of how maths can be applied and suggestions for classroom activities. The series 'A Mathematician's Holiday' was developed from a mathematical workshop based around the theme of travel which three Mathemagicians – Dr Thomas Woolley and students William Binzi and Daniel Martin – had created a for a three-week trip visiting schools in China.

Podcasting: a perfect, but sometimes deceptively simple, solution

'Since the workshop was already in place, it was merely a case of getting it on film' – Mareli Augustyn, Mathemagicians Co-ordinator.Once the Mathemagicians had agreed to be filmed, the Educational Media Unit from IT Services came on board to provide video services. A number of local school students and members from the Mathematics Department were invited to attend the workshop, and were encouraged to participate actively. In addition to the workshop itself, a short explanation of the concepts in each section was filmed.



Figure 1 Mareli Augustyn and the team of Mathemagicians were recognised with an OxTALENT award.

Together, the IT Services team and Mareli edited the podcasts before releasing them online on the <u>TES Resources</u> repository, <u>Oxford Podcasts</u> and iTunes U. Evidence of their popularity lies in the 600 downloads from TES Resources between November 2014 and March 2016. The most popular titles have proved to be 'Abstraction and Graph Theory', 'Logic and Decision Trees' and 'Encoding and Binary'.

The path to success of the 'A Mathematician's Holiday' series was peppered with several challenges. Mareli offers some useful pointers to those looking to create a similar resource:

- Videos are less spontaneous and less improvised than workshops, so pay careful attention to planning and structuring.
- Every shot 'sells' a message, so make sure it says clearly what you want to get across.
- Hone your video editing skills first by attending a training course.

Further information

The <u>Educational Media Unit</u> in IT Services offers digital video production and editing services.

The IT Learning Centre in IT Services offers a number of courses on editing and postproduction for short videos.



Runner-up, OxTALENT 2015 award for academic podcasting. The

text in this case study has been adapted from Mareli Augustyn's entry for the OxTALENT competition.