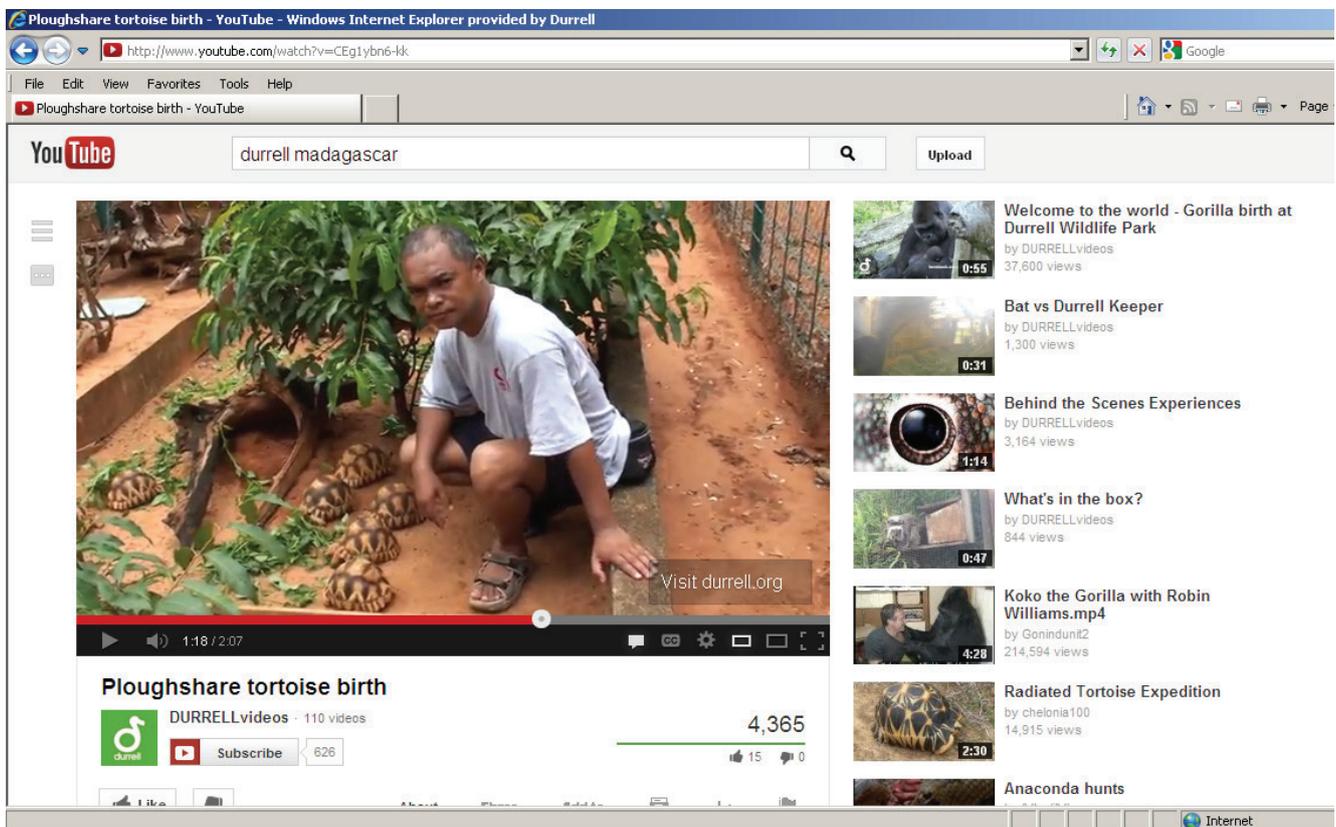


Using online media to connect students with field conservationists

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Abstract

"I'm a conservationist" was a learning experience which aimed to engage keystone three students with wildlife conservation by allowing them to interact directly with field conservationists online. This was done through blogs and Skype conversations for a week before the students voted for their favourite conservationists to win £500 for their species. The students completed questionnaires before and after the project. Analysis by chi-square tests revealed significant differences in the students' knowledge of where Durrell has field projects and also in their level of concern for the study species.



Online footage from the Madagascar team

Introduction

There is a growing trend to utilise online media and new technology to enhance learning about wildlife and conservation (e.g. Hammond 2012, Smith et al. 2011). BIAZA, EAZA and WAZA encourage their members to use a variety of media including those online to engage their visitors and to use internet technologies for specific educational purposes (BIAZA 2009, EAZA 2008, WAZA 2005) and it is the challenge for educators to discover new ways to use technology and reorganise our teaching to offer students new learning opportunities afforded by these technologies (Brewer 2003).

These technologies are becoming increasingly familiar to visitors and can offer insights into elements of our conservation work that would not normally be accessible to the average visitor e.g. using video-footage and digital photos on screens and websites to explain what happens behind the scenes or on field projects.

With 45 projects in 14 countries around the world, Durrell faces a challenge to engage people with its field projects, particularly those in-situ projects where there are no animals on-show for the wildlife park visitors to see. This issue was highlighted at the public participation meetings, part of the EUZOOS-XXI project, when participants encouraged Durrell to find ways of enabling people to see behind the scenes and how that work connects with their conservation in the wild (EUZOOS-XXI, 2011).

In the UK, feedback from teachers who took part in “I’m a scientist, get me out of here!” described how the students enjoyed a learning experience that engaged all pupils irrespective of ability and background (Pontin 2011). The online project, run by GalloManor, allows students to converse with scientists to learn more about what they do. This inspired the education team to develop “I’m a conservationist” where students in Jersey were given the opportunity to learn about Durrell’s conservation work directly from the people doing it wherever they were in the world. The project used a combination of blogs and Skype to give the students direct contact with the conservationists in their respective countries and was supported by additional campaign activities in science lessons to promote the cause of their favourite.

Method

The project ran from Tuesday 19th March – Wednesday 27th March 2013 and more than 100 year eight (age 12-13) students from Grainville School in Jersey participated. The aim of the project was to allow the students to engage directly with members of the field project teams to learn more about the species they are conserving and the daily activities they undertake. Through evaluation we hoped to demonstrate that this engagement can have a significant impact on the students’ understanding and their attitude towards endangered species.

The project had a competitive element as there was a £500 prize to be awarded at the end of the week to the conservationist who the students voted as the winner. This form of competition has become very familiar in recent years through popular television shows such as I’m a Celebrity, X-Factor, Britain’s Got Talent, etc.

Before the project began, the students completed a questionnaire to assess their existing knowledge and attitudes. This was repeated after the project to see if there had been a change in their understanding and level of concern along with some additional questions to find out what the students thought of the project.

The students’ understanding of where Durrell staff work and what they do was assessed through open questions and their attitude towards each species was assessed with a 5-point Likert-type scale running from Not At All Concerned to Very Concerned. As well as the four study species, we included three additional species: meerkats - a popular but non-threatened species kept at the wildlife park, orange-tailed skink - a threatened species kept off-show and supported in the field by Durrell and Sumatran tiger - a threatened species Durrell is not involved with.

At the launch, a member of the education team outlined the project and announced the four conservationists and their species.

Name: **Francesca Cunninghame**
 Location: Galapagos
 Species: Mangrove finch
 Red List Status: Critically Endangered



Name: **Lloyd Martin**
 Location: Montserrat, Caribbean
 Species: Mountain chicken
 Red List Status: Critically Endangered

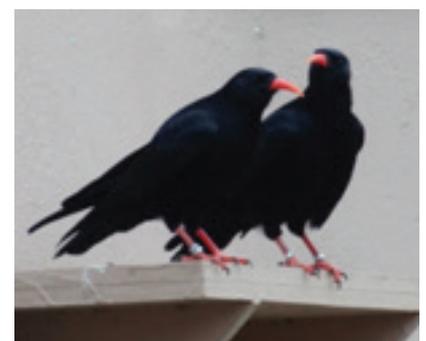


The Durrell field conservationists and their species

Name: **Lance Woolaver**
 Location: Madagascar
 Species: Ploughshare tortoise
 Red List Status: Critically Endangered



Name: **Elizabeth Corry**
 Location: Jersey
 Species: Red-billed chough
 Red List Status: Least Concern (Locally Extinct, part of a reintroduction project)



I'm a conservationist, get me out of here!



Name: Lloyd
Location: Montserrat, Caribbean
Species: Mountain chicken frog
Status: Critically Endangered
[View blog](#)



Name: Liz
Location: Jersey
Species: Red-billed chough
Status: Locally Extinct
[View blog](#)



Name: Lance
Location: Madagascar
Species: Ploughshare tortoise
Status: Critically Endangered
[View blog](#)



Name: Francesca
Location: Galapagos, Ecuador
Species: Mangrove finch
Status: Critically Endangered
[View blog](#)

In their science groups, students developed questions they could ask each of the conservationists.

The students' homework for the week was to go online, read the blogs and ask their questions. The conservationists tried to add a daily entry of their activities for the students to read. This included photos and links to video-footage for the students to see as well.

In a joint science lesson, the students were able to speak to the conservationists directly through Skype, broadcast on the big screen and with key students designated to ask the questions from their science group.

Other science lessons were devoted to students making campaign posters and giving presentations to each other about their favourite. The students then cast their vote anonymously for the conservationist they thought should win £500 for their species.

The votes were counted overnight and the winner was announced the following day in a special assembly. The students voted Lance and the ploughshare tortoise as the winner and we contacted Lance through Skype to congratulate him and found out that he would use the money to buy transmitters for radio-tracking the tortoises in the wild.

The school also awarded prizes to the students who had participated most in the project.

Results of the student vote

| | |
|------------------------------------|----|
| Lance and the ploughshare tortoise | 59 |
| Lloyd and the mountain chicken | 21 |
| Francesca and the mangrove finch | 13 |
| Liz and the red-billed chough | 10 |

Results

During the project, the blogs received more than 2000 views in total from Jersey, some will have been teachers and Durrell staff involved with the project.



Blog views and comments

| Blog | Page views | Comments |
|------------------------------------|------------|----------|
| Lance and the ploughshare tortoise | 835 | 43 |
| Lloyd and the mountain chicken | 599 | 29 |
| Francesca and the mangrove finch | 493 | 19 |
| Liz and the red-billed chough | 602 | 32 |

We received 90 completed surveys from the teachers and used Excel and chi-square tests to look for significant differences between the pre-project and post-project data.

In the pre-project survey, when asked to name places where Durrell has field projects, more than 50% of the students were unable to correctly name any locations but after the project 75% could name at least two of the locations and 50% of the students were able to correctly name all four of the field project locations. A chi-square test gave a significant result ($\chi^2 = 46.81$, 4 degrees of freedom, $p < 0.0001$).

Students were asked what sort of activities Durrell's field staff undertake. Similar answers were grouped into categories for analysis. Certain technical phrases, such as tagging and breeding, only occurred in the post-project answers, however analysis by chi-square test did not reveal a significant difference ($\chi^2 = 14.16$, 8 degrees of freedom, $p = 0.078$).

The students were also asked how concerned they were about the different species. A chi-square test showed significant results for the four study species but did not show significant change for the control species.

After the project, the students were asked what they had enjoyed most about the project, 53% mentioned skyping the conservationists, 29% mentioned making the poster and campaign activities, 11% cited the blog, 8% the actual voting and 18% other responses including "All of it" and "learning about the animals".

Discussion

Country of origin is included on all the species enclosure labels at the wildlife park, additionally those locations where we are working in the field are reinforced with further signage and talks.

More than 75% of the students had visited the park within the last year yet most of the students were unable to name where Durrell had field projects before the project. The project provided significant reinforcement of the different locations: through the students' research and campaign activities, discussing the time difference and weather directly with the conservationists over Skype and each time they visited the blog link page. By offering information in a variety of formats, we provide reinforcement of key ideas but also offer alternative opportunities for people with different learning styles to engage with the information. Unfortunately the

evaluation does not provide scope to assess whether one format was more successful than the others.

When analysing the students' responses regarding the activities undertaken by field staff, direct comparison of a student's pre- and post-results revealed 38% showing a positive change through increased use of technical terms (such as tagging, breeding, etc) and fuller or correct answers compared with their pre-project response. However, there was less reinforcement of the field staff's activities built into the project as this was only covered through the blogs (which some students admitted not visiting for their homework) and the Skype conversations, also the question itself was very broad, all of which may have contributed to the less significant change in students' knowledge.

Another goal was to assess whether the project had an impact on students' concern for species. It was apparent from the pre-project results that students were already aware of the plight of charismatic species through other sources as they were most concerned about the Sumatran tiger which Durrell does not work with. A number of students had not heard of some of the study species before the project (particularly red-billed chough and mangrove finch). However learning about the species from such passionate champions, as Lance, Liz, Lloyd and Francesca, changed their attitude and results show that there was a significant increase in the student's level of concern for the study species after the project compared with before. This suggests that there is a link between knowledge/awareness of a species and the level of concern an individual will feel for that species.

The value of including a variety of activities to engage diverse learning styles was highlighted by all the elements being mentioned by the students as the most enjoyable. 53% mentioned Skype which may have been due to the novelty of communicating directly with field conservationists working in such unusual parts of the world. (They also enjoyed seeing themselves on the big screen through the webcam!)

The teachers were able to adjust the campaign activities for different ability groups and the homework gave enthusiastic students the opportunity to engage more with the conservationists through the blogs. When asked which blog was their favourite, Lance was most popular but the pattern of answers did not match the voting results for the others suggesting that other factors, perhaps the charisma of the animal, also influenced students' decision over who should win. We did not include a mammal as we thought cute and fluffy might sway the voters. We hope to include

one next year and it will be interesting to try to assess whether the charisma of the species has a greater or lesser influence than the charisma of the field conservationist.

Voting for a winner and empowering the students to make a decision that would have a genuine impact on a field conservation project seems to not only have provided an engaging hook for the project but also caused the students to think deeply about choosing the winner. Student feedback included: "When I got to vote we had to think carefully and £500 could depend on me" and "The choosing for votes I enjoyed the least because it was very difficult between the mountain chicken and ploughshare tortoise".

Conclusion

Blogs and Skype provide education practitioners with opportunities to link our audiences directly with activities taking place in the field. They provide an exciting and engaging learning experience that can significantly influence the level of concern for a species as well as extending a student's understanding. Feedback from the school, both pupils and teachers, as well as from the conservationists themselves has been very positive and we hope to run an expanded version of "I'm a Conservationist" again in the future with more participants. One unexpected benefit of the project has been the strengthening of the links between the education staff and the field project staff who, for geographical reasons, do not often get the opportunity to work together.

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Please contact the author if you want to see more of the data and analysis of results that for reasons of space has been edited from this article.

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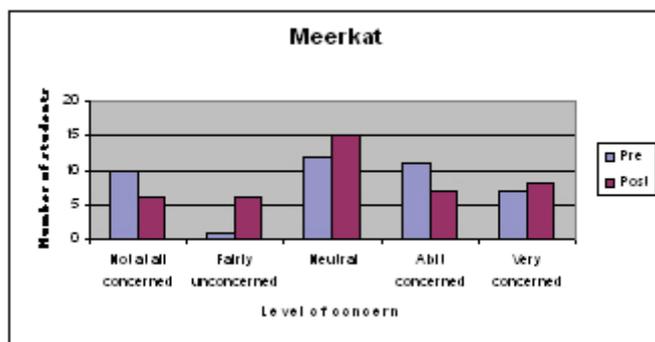
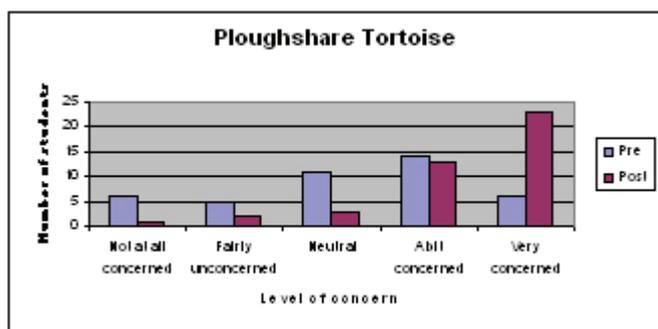


Figure – Illustration of change in students' attitude for two of the species