

The Importance of science communication

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CHELTENHAM FESTIVALS **BRITISH COUNCIL** **AARHUS UNIVERSITY**



International FameLab TALKING SCIENCE **What is FameLab?**

- International communications competition
- Aims to identify, train and mentor scientists and engineers with a flair for communicating with public audiences.
- Started in 2005 in the UK by Cheltenham Science Festival; partnership with British Council in 2007 sees competition going global; in 2012 NASA joins to run the competition in the USA.
- So far more than 5000 young scientists and engineers participating in over 25 different countries from Hong Kong to South Africa, USA to Egypt have taken part.

So what? (Why) should scientists communicate?

What do you think?





FameLab 2013 International Winner
Fergus McAuliffe (Ireland)

Why communicate



Nature.com – Soapbox Science blog – 27 Feb 2013
<http://tinyurl.com/Peer15>

- > Benefits for the researcher
- > From a university perspective
- > Benefits to public participants
- > Benefits to society
- > Benefits to policy makers

Public perceptions of Science

75% of the UK public agree that "*we ought to hear about potential new areas of science before they happen, not afterwards*"

75% believe academics should listen more to what ordinary people think

Over half believe that scientists pay insufficient attention to potential risks

In the UK £800m per year spent on widening participation projects



Why communicate Researcher perspective

"My public engagement activities have given me a new perspective and broader outlook to my own research work. For example, I have recently collaborated with a microbiologist, applying quantum mechanics to biology, which arose from new contacts."

Professor Jim Al-Khalili Prof. of Physics and Senior Media Fellow at The University of Surrey; presenter BBC Radio 4 - "The Life Scientific"; BBC 2 – "Horizon"; BBC 4 – "Atom"



Why communicate

Why communicate

Benefits for the researcher

Why communicate Benefits to public participants

- Influence – value of having views seriously considered
- Learning – new interest, knowledge and skills
- Increased confidence in using scientific information
- Social interaction and personal satisfaction
- Greater trust in public policy making



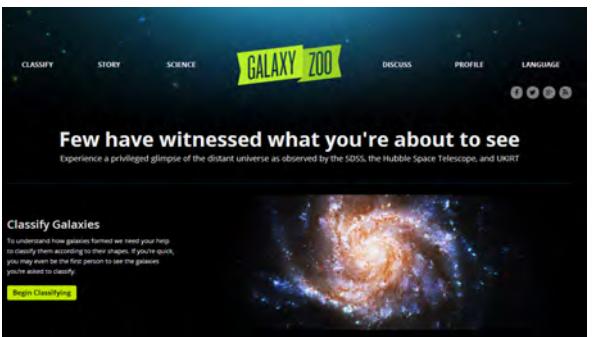
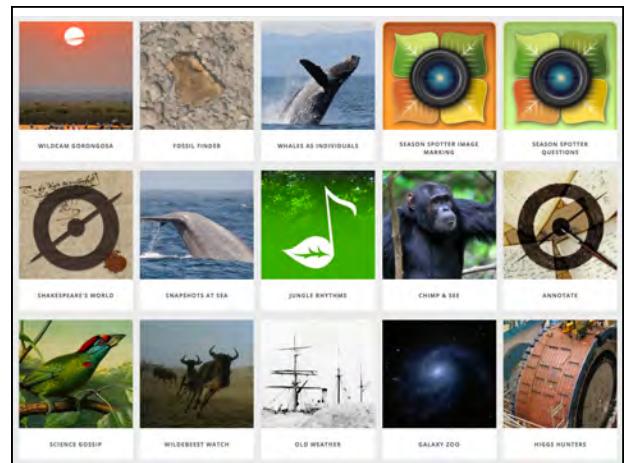
Why communicate Benefits to society

- Public engagement helps to **maximise the flow of knowledge** between higher education institutions & societies
- It **contributes to social justice and corporate responsibility**
- It helps build trust and mutual understanding
- e.g. *In the UK over 75% of the public agree that "we ought to hear about potential new areas of science before they happen, not afterwards"*
- It generates unforeseen outcomes, stimulates creativity and innovation
 - Fresh perspectives
 - Challenging questions
 - Lateral insights



Citizen Science – Galaxy Zoo

Need to classify **one million galaxies**? No problem ... with 250,000 amateurs!

WILDCAM SORONGOSA	FOSSEL FINDER	WHALES AS INDIVIDUALS	SEASON SPOTTER IMAGE MARKING	SEASON SPOTTER QUESTIONS
SHAKESPEARE'S WORLD	SNAPSHOTS AT SEA	JUNGLE RHYTHMS	CHIMP & SEE	ANNOTATE
SCIENCE GOSSIP	WILDEBEEST WATCH	OLD WEATHER	GALAXY ZOO	HIGGS HUNTERS

Citizen Science – Fold it



<https://fold.it/portal/>

Changing cultures: reaching audiences, open source publishing & broader engagement

How journals like Nature, Cell and Science are damaging science

The incentives offered by top journals distort science, just as big bonuses distort banking

the guardian

Randy Schekman says his lab will no longer send papers to Nature, Cell and Science as they distort scientific process

THE CHRONICLE OF HIGHER EDUCATION

Commentary

We Must Stop the Avalanche of Low Quality Research

Adam Smith, The Chronicle of Higher Education, December 2013

Why communicate

Benefits to policy makers

- Better policy solutions, policy and decision making process
- Savings of time and money
- Spreading public awareness & understanding of science issues

Who puts the science in MPs' in trays?
It's an uphill struggle to get science on politicians' agenda. Is the Parliamentary Office of Science and Technology up to the task?

Science and politics: chalk and cheese?
Science may be vital, but the people with scientific knowledge seem less connected than ever to the people with power

Adam Smith
the guardian, Friday 4 June 2012 17.20 BST
[Jump to comments \(56\)](#)

Why communicate

In summary:

- Skills development
- Career enhancement
- Enhancing your research quality and its impact
- New research perspectives
- Higher personal and institutional profile
- Influence and networking opportunities
- Forming new collaborations and partnerships
- Enjoyment and personal reward
- Additional funding
- Increasing awareness of the value of research to society
- Increasing student recruitment
- Inspiring the next generation of researchers



www.rcuk.ac.uk/

Why communicate

How / resources:

- (Inter)national Science Associations
- Media Fellowships
- FameLab, Pint of Science, Bright Club, Science Show Off
- Institute of Physics, STEMNET, RSC, RAEng, Royal Society
- Science Festivals – e.g. World Science Festival, Science Slam Festival, UNESCO ciencia & cultura programme
- University communication / public engagement teams
- Popular science magazines e.g. *New Scientist*, *Scientific American*
- Social media and blogs
- Science Media Centre [...](#)

Tomorrow– Flash talk training

Aims:

- “I understand why being involved in public engagement alongside my research can benefit my research and wiser society”
- “I’ve a better idea of science communications opportunities I might pursue and / or involve my students with.”
- “I understand how to help my institution, students, research group find resources for being involved in public engagement.”