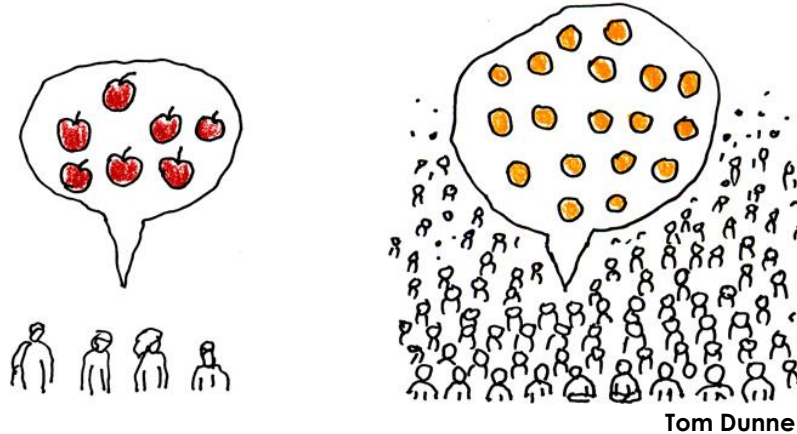


Geoscience Communication: from pupils to engineers



Stephanie G. Zihms



s.zihms@gmail.com



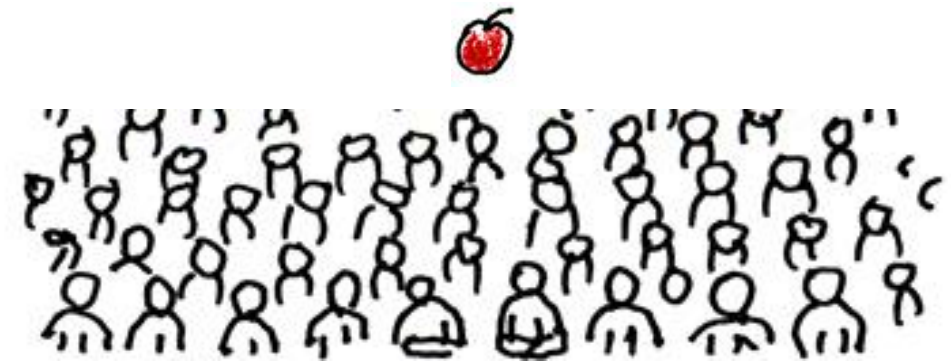
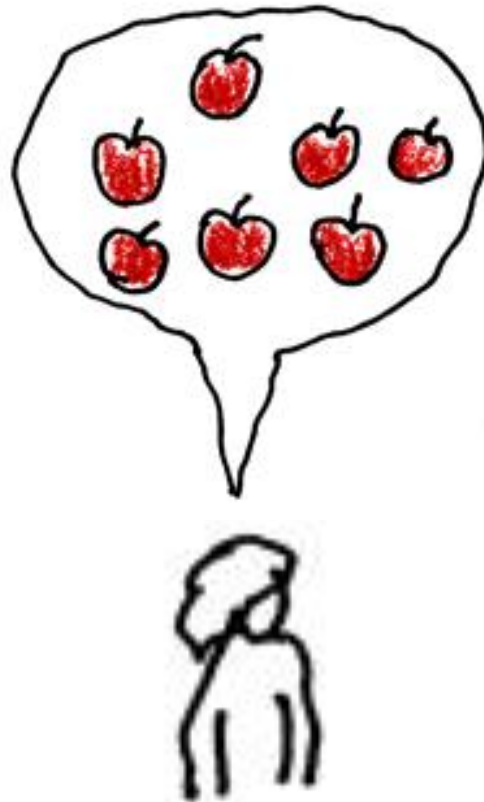
@geomechsteph



Pupils

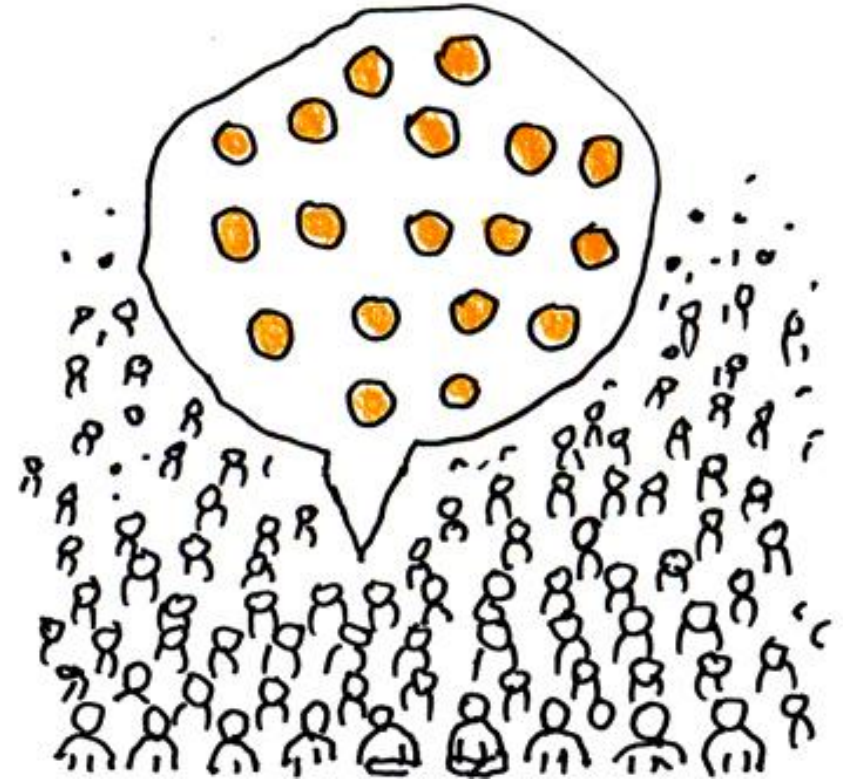


Engineers

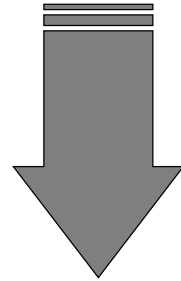


Everyone in between

- Native language
- Social Media
- Being in public
- Industry meetings



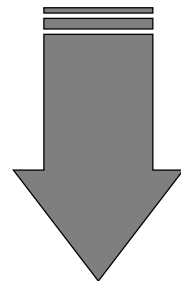
- What's the message?
- What should people remember & why
- Who is the audience
- How are they connected to the message



- How best to engage the audience
- How best to communicate the message



Communicators



Audience

by Tom Dunne

- WHO is going to communicate

**native
scientist**
www.nativescientist.com



pupils

increase STEM
capital
promote heritage
languages



researchers

improve communication
skills
increase research
impact

Pupils

2 in 3



feel prouder of speaking
more than one language



Scientists

are an asset for career

87%

way to meet new people

89%

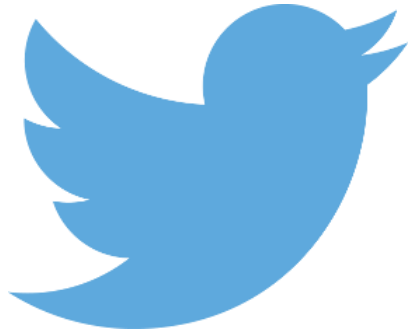
boost satisfaction and self-confidence

89%

Native Language(s)

- Highly international workforce
- Instant connection – message can be secondary
- Explain things differently
- Connect or learn from experts





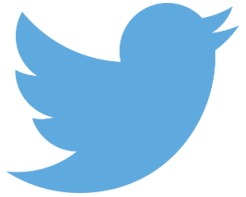
- Interact with the audience
- Start building networks
 - Beyond research



- Conferences #EGU19
- Guest for a rocur (rotation curation) account or blog



- Good Social Media policy



Account home
Dr Stephanie Zihms @GeomechSteph
 Page updated daily

28 day summary with change over previous period



Aug 2018 • 30 days so far...

TWEET HIGHLIGHTS

Top Tweet earned 4,041 impressions

Great conference @geolsoc on 4th September on #Geoscience #Communication - it's only £25.00 for students to attend! Don't miss out & learn from some amazing people geolsoc.org.uk/PG-Communicati... [image credit: @ItchyFeetComic] pic.twitter.com/CrWDBr4RBc



1 8 14

View Tweet activity

View all Tweet activity

Top mention earned 57 engagements



Sam Illingworth
 @samillingworth · Aug 24

@dinnerpartysci @iamhazeligibson @LauRob85 Also, I now have LOADS of European #scicomm heroes. Here is just a VERY short list: @jesswade, @ultrajessamyn, @iamhazeligibson, @LauRob85, @drclairemurray, @AnnaGSlater, @GeomechSteph, @connorsSL, @SaraMynott, @JoVerran, @DrCatMuller, @Dr_Docherty and of course @dinnerpartysci!

3 3 11

View Tweet

Top media Tweet earned 3,404 impressions

@Richard_1B Get the current

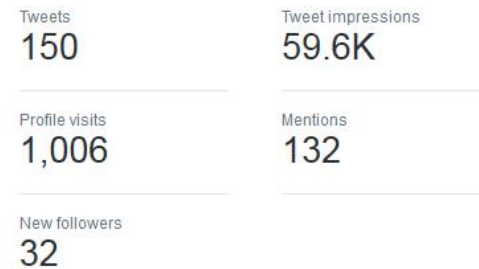
ADVERTISE ON TWITTER

Get your Tweets in front of more people

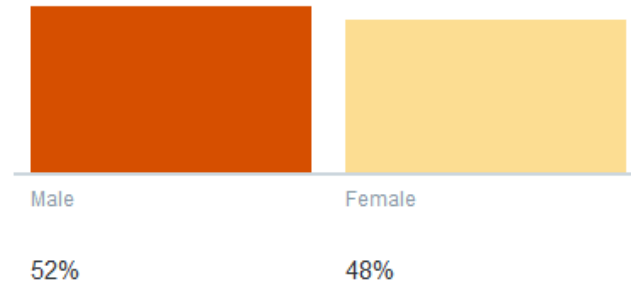
Promoted Tweets and content open up your reach on Twitter to more people.

Get started

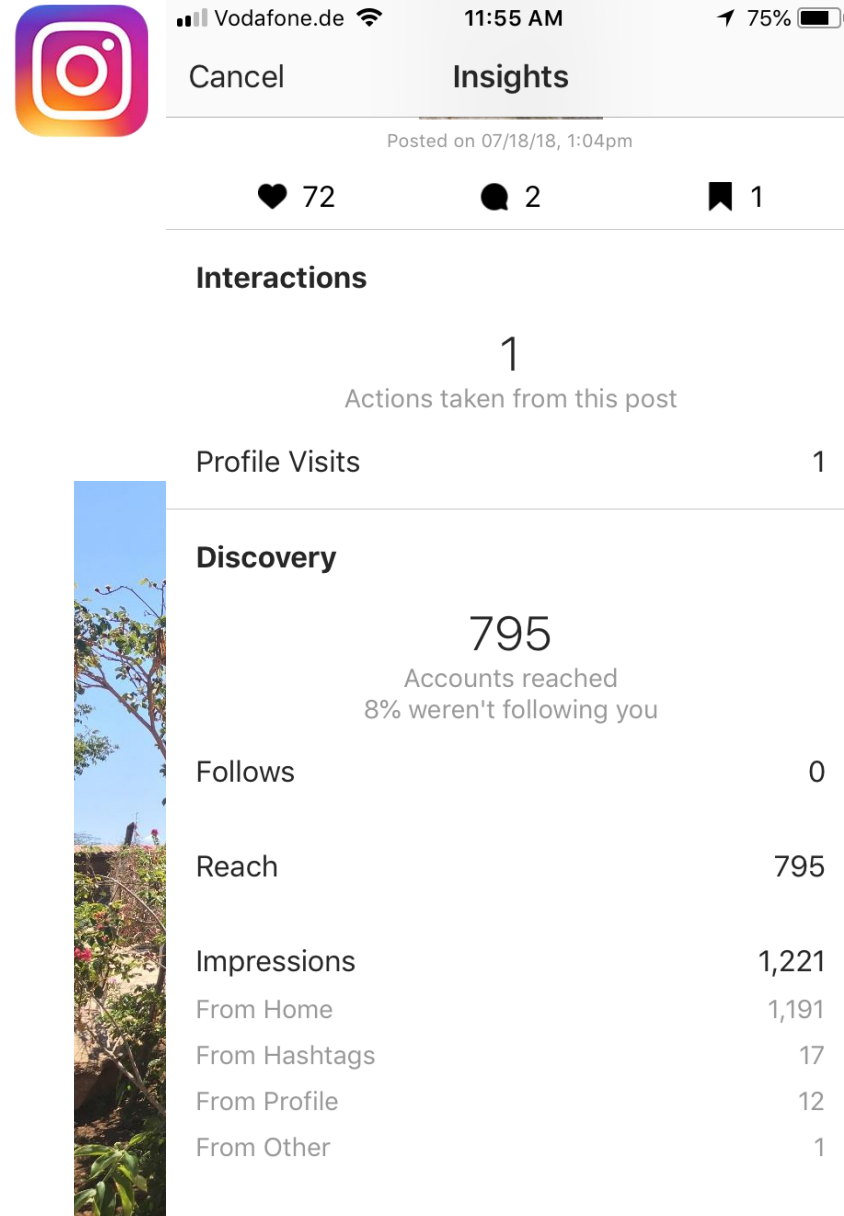
AUG 2018 SUMMARY



Gender





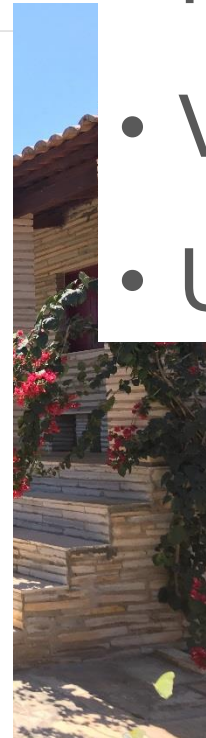


Instagram Insights screenshot showing engagement metrics for a post. The post was shared on 07/18/18 at 1:04pm and has received 72 likes, 2 comments, and 1 share. The Insights section shows 1 action taken from the post, 1 profile visit, 795 reach (8% from non-followers), 1,221 impressions (1,191 from home, 17 from hashtags, 12 from profile, and 1 from other), and 0 follows.

Metric	Value
Profile Visits	1
Discovery	795
Accounts reached	8% weren't following you
Follows	0
Reach	795
Impressions	1,221
From Home	1,191
From Hashtags	17
From Profile	12
From Other	1



- Not as interactive as Twitter
- Visual communication
- Unlimited text

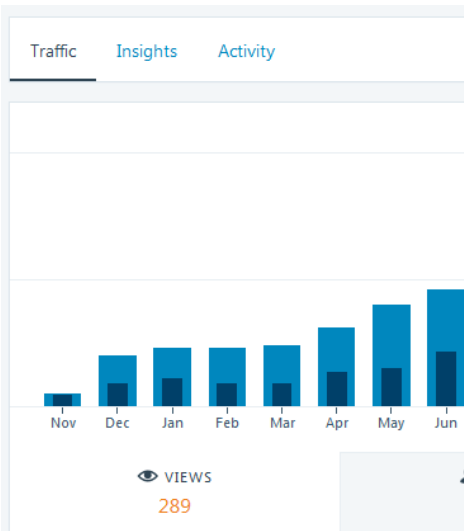




- Opportunity to write more about your work
- Summarise papers & give more detail e.g. fieldwork involved
- Great way to practice writing & editing
- Shared writing works well for companies or research groups
- Reach a broader audience – taking people along your ‘journey’
- Blog posts can be picked up by other media very easily
- Guest posts for existing blogs or start a research group blog

My blog: <https://stephaniezhms.wordpress.com/>





Posts & Pages

Title	Views
Home page / Archives	94
Luck - can you grow it?	74
Keeping track of my MS	17
Bullet journaling...? Here's how I'm gettin	16
About me	14
Why I'm running 10k to raise money for	13
New year - New journal	10
Home	6
Publications	4
Newton Fund Research Collaboration Pr	4

Science from the core of the British Geological Survey

GEOBLOGY

Home About Us Contribute

THURSDAY, 30 AUGUST 2018

Using geochemistry to study rainfall variability and human impact history of the Australian subtropics...by Charlie Maxson

Hello, I am Charlie, a PhD student between the University of Adelaide, the University of Nottingham, and the British Geological Survey. I have recently started my PhD looking at Holocene rainfall variability and human impact in subtropical Australia...

Rainfall variability in Australia can be extreme from year to year. Large-scale rainfall drivers like the El Niño-Southern Oscillation, Indian Ocean Dipole, and Southern Annular Mode create quite variable conditions across the country due to the ever-changing nature of these systems. The complex nature of, and interactions between, these systems create a distinct challenge in determining how rainfall will vary over a given period in Australia. This variability in rainfall and the changing climate could lead to significant economic, environmental, and water resource issues if not properly understood and addressed.

My approach to understanding rainfall variability will be an in-depth study of the lakes of North Stradbroke Island, known locally as 'Straddie'. Straddie is the second largest sand island in the world. It formed during sea-level high stands in glacial cycles through the last million years. Sands were pushed in and settled on the location of the island, creating dunes. Dune hollows then filled with organic matter, creating an impermeable layer, into which rainfall collected, creating lakes on the island. Over 50 of these lakes now exist, with some histories going back at least 200,000 years.



The team from my recent trip to Blue Lake.



Blue Lake from above.

Of particular interest is Blue Lake; a unique lake in Australia because it is particularly resistant to changes in climate through the Holocene (approximately last 12,000 years). Blue Lake is a groundwater 'window lake,' meaning it is an expression of the groundwater table at the surface of the island. While other lakes on the island are exclusively filled by rainfall and drained by evaporation, Blue Lake is fed by the groundwater table and drains out through a single outflow creek. The utility of Blue Lake is that it is a very stable system, so any change in the lake itself can be inferred as a change in regional climate. With the data from Blue Lake I hope to infer changes in the source of rainfall (and thus air temperatures) from isotope data going back through time. I can then quantitatively reconstruct climate on Straddie through the Holocene and better understand human impact. Ultimately, I will be inferring rainfall source (tropical Pacific or Southern Ocean), which will tell us about the influence of large climate drivers in the past.

This study will have particular importance to traditional owners of Straddie and for understanding Holocene climate variability across Australia. Ecological management will be of utmost importance in the near future to best preserve the unique natural beauty and biodiversity seen in Australia. My hope for this project is to inform the local managers of Straddie (the QYAC; Quandamooka Yoolooburabee Aboriginal Corporation) of possible outcomes of human induced climate change.

Charlie Maxson is a PhD student between University of Adelaide, the University of Nottingham, and the British Geological Survey and is being supervised by Dr John Tibby, Dr Jonathan Tyler and Prof Melanie Leng. Follow Charlie on Instagram and twitter @charlie_maxson

[web.facebook.com](#)

1

United Kingdom

112

United States

46



Science Festivals Door Open Days

- Planning
- Engaging & interactive
- Chance to talk to a lot of people
– especially at mixed events
- Once set up can easily be used
by others



Soapbox Science



- Challenging & fun
 - Audience more known – ticketed event
 - Good practice for talks & other events
- Video [YouTube](#)



- Comfortable speaker
- Audience is an unknown – strong message
- Engaging & interactive
- Anything can happen

Industry meetings



Industry meetings



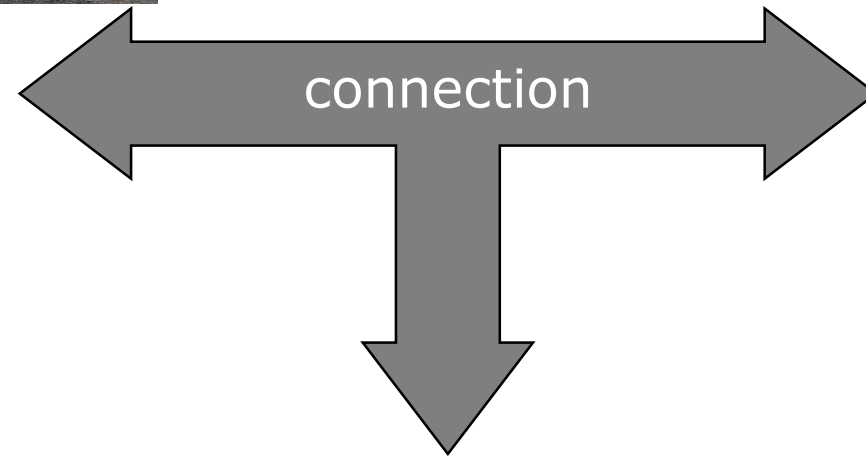
Industry meetings



Message



Audience



Communication method &
Communicator(s)



- **Find a connection between audience & message**
 - Relevance is key – Why does it matter to them
 - Why do you care
- **Find a communicator that fits the communication pathway**
 - Provide or take up training / opportunities
 - Get out of your comfort zone
- **Apply these principals to all your interactions**
 - Key communication principles
 - Let your enthusiasm & personality dictate your communication pathway



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<https://stephaniezihms.wordpress.com/home/>

