

## Postgraduate Research Conference 2013

### Winners

#### Postgraduate Researcher of the Year 2013

1 <sup>st</sup> Martin Muir, Mechanical Engineering, Engineering
2nd Jim Tiernan, Medicine, Medicine and Health
3rd (joint) David Shearing, Performance and Cultural Industries, PVAC
3rd (joint) Claire Nash, Medicine, Medicine and Health

#### Three Minute Thesis 2013

1 <sup>st</sup> Rachael Kelley Medicine	What happens if mum doesn't know best?
2nd Cara Attenborough, English	Click here to install Language Awareness
3rd Nic Gowland, Molecular and Cellular Biology	Could vitamin E keep us walking? The next 'step' for total hip replacements

#### Postgraduate Research Poster of the Year

<p>1<sup>st</sup> Nicola Buckland, Psychological Sciences</p>	
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2nd Fran Darlington,  
Geography

### Minding the Gap: Are widening ethnic differences in health all just a case of snakes and ladders?

Fran Darlington<sup>1</sup>, Paul Norman (University of Leeds), Dominic Ballas (University of Sheffield)  
\*pfn@leeds.ac.uk | @F\_Darlington

Those living in more advantaged areas and belonging to higher social classes are MORE likely to be in BETTER HEALTH than those in more deprived areas or in lower social classes.

Health is SOCIALLY GRADED which results in INEQUALITIES IN HEALTH.

As certain minority ethnic groups such as Black African or Pakistani and Bangladeshi groups are MORE likely to live in more deprived areas or belong to lower social classes, this leads to ETHNIC INEQUALITIES IN HEALTH.

And the gap may be widening...

As a population, we are highly mobile. MOVING HOUSE on average 8 times in our lives...

We also change SOCIAL CLASS through PROMOTION, EDUCATION or even JOB LOSS and UNEMPLOYMENT.

So might MOVING to a nicer area or moving up the SOCIAL LADDER IMPROVE our health?  
Or MOVING to a more deprived area or moving down the SOCIAL LADDER might WORSEN our health?

But who moves others?  
What if YOUR dice was WEIGHTED differently depending on your ETHNICITY, SOCIAL CLASS or the TYPE OF AREA you live? What if it was WEIGHTED depending on your HEALTH?  
Would YOU have the same chance as someone else in CLIMBING THE LADDERS? Or would you be sliding DOWN THE SNAKES?

My RESEARCH will try and QUANTIFY the effect of these hypothetically differently weighted dice...

If existing HEALTH and SOCIOECONOMIC attributes influence our chances of CLIMBING UP or SLIDING DOWN as we move through life, this SORTING process may help explain WIDENING ETHNIC INEQUALITIES IN HEALTH.

I will contribute to: **Improved Understanding** + **Stronger Evidence** → **EFFECTIVE POLICY** so we can... **MIND THE GAP!!**

Want to learn more? SCAN this code and move across the board using the --and-- keys.

3rd (Joint) Chung Gilliland,  
Education

### When the Power of Language becomes unjust: some issues facing mainstream education in Vietnam

**Research Background**

Common Vietnam has a population of 82.5 million of whom 6.69 million are from 53 different ethnic minority groups speaking 108 languages. The official language is Vietnamese, spoken by the majority ethnic group and the only language used in the education system.

Problems: Ethnic minority children are reported as having low academic achievement, a low enrollment rate and high rate of discontinuing their schooling.

Participants: Four 8-year-old pupils from one ethnic minority whose home language is not Vietnamese. Qualitative Methods: Participant Observations, Interviews under Ethnographic methodology.

**Research Questions**

- In which ways do ethnic diversity pupils become disadvantaged in class learning?
- What may happen to those being disadvantaged in class?

**Facts: The Programme**

Time allocated weekly for each subject

Subjects to be tested

Mid-year tests (4 months after the children enter the school) and end-of-year tests (4 months after the mid-year test) decide the final academic achievement. The scores 50% is needed to pass, getting less than 50% in select to repeat the year.

**Zooming-in on the Data**

- The curriculum focuses heavily on teaching and learning Vietnamese but English other subjects are almost invisible.
- Materials in many texts based on being mainly Vietnamese, hence in being unable to understand the text books.
- Vietnamese language test is mostly writing-based focusing on both the accuracy and the appearance of an answer sheet. This test assesses First and Final Factors to decide the child's fate.
- Clear test scores could be calculated as Special Points.

**The Issues**

“Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid”  
— Albert Einstein.

**What do you think?**

- Can language cause ethnic and/or academic advantage for learners?
- What are the main (ethical/moral) language barriers to be tested?
- Shouldn't most other than literacy an individual approach be used in teaching and testing Maths for second language learners in their early years?
- Shouldn't regarding the tests and regarding the year progression be re-examined in early years?
- Can class learning in a second language always be accompanied with Special Points?

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School of Education, University of Leeds

3rd (Joint) Jonathan Acomb,  
SPEME

### Not a waste: How we could make waste plastics worth their weight in gold

UNIVERSITY OF LEEDS  
Jonathan Acomb, SPEME, Engineering

**The problem with plastics**

Plastics are one of the most used materials in the world and future use is estimated to increase. However conservation and separating the different types of plastics make recycling difficult. As a result recycling rates are low and most plastics still end up in unsustainable landfill.

**What is the alternative?**

By using a process called thermal chemical recycling, the waste plastics can be converted into more valuable products.

**Hydrogen**

A green alternative to fossil fuels; gives off no carbon dioxide

Already used in some cars

**Carbon nanotubes**

Valuable form of carbon similar to graphite found in pencils

Hollow cylindrical tubes which are 10,000 times smaller than human hair

**Why hydrogen gas and carbon nanotubes?**

Hydrogen is an important future fuel and energy carrier. It is far less polluting than coal, oil and gas and so is better for the environment. It doesn't produce carbon dioxide, a major greenhouse gas.




**Carbon nanotubes** are more than 25 times more valuable than gold. It can be worth up to £660. They are stronger than steel, have large surface area and can conduct electricity and could be used in solar panels, hydrogen fuel cells, water purification, touch screen devices, high strength materials or even a space elevator.

**What are the implications?**

By varying the conditions used, we can get larger yields of hydrogen and carbon nanotubes. This would generate lots of money from a waste resource.

If undertaken on a large scale it would divert a large amount of waste plastics from landfill. This is because the process can use a wide variety of plastics and mixtures of more than one plastic at once.

## Postgraduate Research Image of the Year

<p>1st (Joint) Alex Wright, Medicine and Computing</p> <p><b>Stitching it all together-my PhD life as a patchwork quilt</b></p>	
<p>1st (Joint) Matt Amison, Earth and Environment</p> <p><b>Taming the Untameable Seas</b></p>	
<p>2nd Eleanor Jew, Earth and Environment</p> <p><b>Cancer of the Forest</b></p>	

## Showcase Movie 2013

<p>1<sup>st</sup> Alex Wright, Medicine and Computing</p>	<p><a href="http://youtu.be/EFaZ3XYdArs">http://youtu.be/EFaZ3XYdArs</a></p>
<p>2nd Crispian Neill, English</p>	<p><a href="http://youtu.be/tnPyppsXw8Q">http://youtu.be/tnPyppsXw8Q</a></p>
<p>3rd Saima Ahmed, Medicine</p>	<p><a href="http://youtu.be/ljk-n3Gds0c">http://youtu.be/ljk-n3Gds0c</a></p>

Still to come...

Thesis Twitter Conference 10<sup>th</sup> December (Details on the PGR Conference website)