The Engineering Exchange: widening access to engineering expertise in London

Sarah Bell, Charlotte Barrow, Vera Bukachi

UCL Engineering Exchange

Widening access to engineering

- Rationale
- Projects
- Forums
- Training
- Evaluation and reflection

Engineering Exchange

- Science shop
- Social justice by other means
- Balancing engagement with engineering expertise
- Two way engagement
- Pragmatic framing of purpose and activities within engineering discourse

Managing engagement

- Local London community groups
- Match making
  - Responsive
  - Purposeful
- Engineering professionalism
- Managing expectations
- Agreeing the brief
- Closing out projects

The numbers

- 2 years
- £132,000
- 21 partner organisations
- 144 members of the public
- 43 UCL staff, 27 students
- 26 CPD learners
- 21 projects initiated, 7 complete

Projects

- Canal transport

- Air pollution

- Delivery logistics

- Domestic heating efficiency

- Smart metering

Refurbish or demolish?

- Just Space and the London Tenants Federation
- London Action Research on Regeneration Group

A good solid piece of work with a run-through and very clear and concrete evidence of results.

Community forms

- London Sustainability Exchange

- Facilitate new projects on specific topics
  - Air pollution and data
  - Healthy aging and wellbeing
  - Smart, sustainable London

Community forms

Best thing about the event? Getting my project to actually happen. I've gained contacts and support to enable this.

Training for engineers

- Revenue

- Delivered with community partners

- Engineering and communities in decision making

- Technology as community development

- Universities and citizen science

- Handbook in preparation

Training feedback

The overall themes and messages are very transferable to our work. Reminds us that we work for society!

It was worthwhile as I have thought about problems in my current research differently.

Future plans

- Pro-bono engineering networks
  - Membership model
  - Consultancies, universities, individuals
- Undergraduate and postgraduate curriculum
- Expanded training programme
- Diversity and equality within projects

Widening access to engineering

- 'Social justice' pragmatically positioned within engineering discourse

- Balancing access and engagement with engineering