Connecting STEM Research, Teaching and Education in Brazil and the UK

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Knowledge Media Institute
Agenda

- Research approach
  Abordagem de pesquisa
- Studies contrasting Brazil x UK
  - Energy literacy
  - Media literacy
- Guest speakers
  Palestrantes convidados
ME

Research Fellow

PhD Computer Science
Human-Computer Interaction research

STEM research and education mediated by technology design

Pesquisa e ensino de STEM mediado por design de tecnologia
Technology as learning tools for triggering social changes
Technologia como ferramenta de aprendizado para iniciar mudanças sociais

INTERACTION DESIGN / DESIGN DE INTERAÇÃO
- Accessibility, Engagement
  Acessibilidade, Engajamento
- Real-life contexts
  Contextos de vida real

PAULO FREIRE'S CRITICAL PEDAGOGY INFLUENCE
- Transformative and situated
  Transformadora e situada
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<th>Technology for Tackling Global Challenges</th>
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<td>Policy making</td>
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<td><strong>E-Gov</strong></td>
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<td>Accessibility and digital literacy</td>
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<td>Acessibilidade e letramento digital</td>
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<td><strong>Engagement with Smart Technology</strong></td>
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<td>Motivational aspects, data visualisations</td>
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<td>In humanitarian crises, for children's online safety</td>
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The elderly / idosos
Adult education / EJAs
Sensory impaired groups / Pessoas com deficiências sensoriais
Schoolchildren / Crianças e jovens em idade escolar
Local (and vulnerable) communities / Comunidades
Online communities

PARTICIPATORY APPROACH
ABORDAGEM PARTICIPATIVA

NGOs
Energy players
Policymakers
Police
TRIGGERING NEW WAYS OF PERCEIVING AND USING ENERGY

DESPERTANDO NOVAS MANEIRAS DE PERCEBER E USAR ENERGIA ELÉTRICA
The Energy Tree

Design

Motivations and cultural aspects

Individual and social engagement

New ways to perceive and use energy
The Energy Tree in Brazil

- Collective challenges and savings
- Game style, local metaphors
  - Desafios coletivos de economia
  - Jogo, metáforas locais
The Energy Tree in UK

Tree as a feedback of engagement

Social media

Monitors

ENERGY LITERACY AND CONSERVATION

CONSUMO CONSCIENTE DE ENERGIA
Lessons learned

• Energy is equally "boring"
• Conceptually hard to grasp

Simple technology, properly designed, could motivate and engage

Technology as learning tools connecting abstract concept to real-life situations

...
Media Literacy
Letramento midiático
Overview

- Algorithms and tools to detect and communicate false news to social media users
  - Algoritmos e ferramentas para detectar e comunicar usuários das mídias sociais
- Are attractive, spread more and faster
  - Atrativa, espalha mais e mais rápido
- Tells what people want to hear
  - Diz o que as pessoas querem ouvir
- How to communicate corrections and convince people to stop spreading false news?
  - Como comunicar correções e convencer pessoas a não disseminarem notícias falsas?
Contrasting Brazil and UK

Preliminary study

Prof Roberto Pereira
Alisson Puska

- Participants associated human values to news headlines
- Judge whether they were true or false
- Prioritise those they would never share and those they could potentially share, and justified the choices

- Participantes associaram valores humanos à manchetes de notícias
- Julgaram se verdadeiras ou falsas
- Priorizaram quais eles nunca compartilhariam e quais eles poderiam compartilhar, e justificaram
Contrasting Brazil and UK

Preliminary study - results

• Equally, participants want to avoid spreading harmful news
  ○ Judgment, reasoning and values associated can be very different across countries
  ○ E.g. Brazilians see as alert or awareness (universalism), UK participants as a harm (corruption, violence...)

- Igualmente, participantes querem evitar espalhar notícias 'perigosas'
- Julgamento, raciocínio e valores podem ser muito diferentes
- Ex: Brasileiros percebem notícias como alerta, participantes no Reino Unido como um dano (corrupção, violência...)

Brazil: Universalism - 13% True
UK: Power - 61% True
Contrasting Brazil and UK

Lessons learned and future works

- Media literacy beyond fact-checking
- "Potential to assert a social harm" can be an important credibility signal to be detected and communicated to social media users
- Social values as a lenses to detect and "persuade" people to think before sharing
- Future work: conversational agents
Guest speakers
Palestrantes convidados
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Prof Cecília Baranaukas

Dr Trevor Collins
Thank you!
Obrigada!

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