If school is the problem, what is the solution?

Other

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If school is the problem, what is the solution?

The inaugural lecture of
Professor Peter Twining
Professor of Education (Futures)

@PeterT

#OUtalks
Get involved
pollev.com/petert508
Why am I here?

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Roughly how many years have you spent in formal education?
15,000 hours in-world + 88,000 contributions to wiki & forum
Pupils’ digital practices outside school

Factors

Hidden
Recognised
Marginalised
Valued
Influencing

Practices in primary schools

Sociocultural framework


funded by the Society for Educational Studies (SES)

www.np3.org.uk
Pupils’ digital practices outside school

Factors

Sociocultural framework

Hidden
Recognised
Marginalised
Valued
Influencing

Practices in primary schools

44 children + parents from 11 different areas (10 in England, 1 in Scotland)
- Briefing (in school) – issued cameras
- Individual interviews (children and parents) using photos as prompts
- Group interviews of children
Why I think schooling is problematic

Unpack elements of a better system
• Pedagogy
• Curriculum

Explore strategies for educational change

Conclusions
Is school the problem?
• Conformity
• ‘Intelligence’
• Work ethic
## What SHOULD the purpose of schooling be?

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<tbody>
<tr>
<td>0</td>
<td>To provide child care so that parents can go to work</td>
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<tr>
<td>0</td>
<td>To employ lots of people (e.g. teachers)</td>
</tr>
<tr>
<td>0</td>
<td>To ensure a compliant society</td>
</tr>
<tr>
<td>0</td>
<td>To prepare young people for employment</td>
</tr>
<tr>
<td>0</td>
<td>To prepare young people for living in the world today and in the future</td>
</tr>
<tr>
<td>0</td>
<td>To enhance the country's ranking in international league tables (e.g. PISA)</td>
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</table>
My vision

Individual fulfillment

Universal wellbeing
It isn’t working

Held back due to fear of making mistakes (p.20)

500 recent high school students (age 16 to 22) in 2018

How often they felt …

stressed out
- All/most of the time: 51%
- Some of the time: 34%
- Barely ever/Never: 15%

bored
- All/most of the time: 44%
- Some of the time: 40%
- Barely ever/Never: 16%

School isn’t working – behaviour ‘issues’

DfE announced a £10 million scheme to crack down on bad behavior in schools – including developing new sanctions and reward schemes

(DfE Press release, May, 2019)

UK ADHD drug use in children < 16

<table>
<thead>
<tr>
<th>No. exclusions</th>
<th>2015/16</th>
<th>2016/17</th>
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<tbody>
<tr>
<td>Permanent</td>
<td>6,685</td>
<td>7,720</td>
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<tr>
<td>Fixed period</td>
<td>339,360</td>
<td>381,865</td>
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Home education

Recent estimates have suggested that there may be around 58,000 home educated children in England; the number appears to have increased substantially in recent years.

(House of Commons Briefing Paper, April 2019)

Off-rolling

OUTRAGEOUSLY not all children are equally likely to be affected. Children with special educational needs, children eligible for free school meals, children looked after, and some minority ethnic groups are all more likely to leave their school. … Where these pupils go to is unclear for half of these pupils,

(from the official Ofsted blog, June 2018)
It isn’t working
Unpack elements of a better system

How we teach
How we learn (in school)

Learn ... by being told
How we learn (in school)

Learn ... by doing (decontextualised)
How we learn

Learn ... through role play
How we learn

Learn ... through becoming
and from then onwards he developed quite quickly, and he left me far behind quite quickly I have to say. And then he met other children like Ashish who knew already a little bit more, and then he put that into practice. And yeah, it just went from there

(Interview with Rory’s mum)

For example at the moment I’m building a town and a high school [in Minecraft], for a new YouTube series, which I’m starting with Ashish and Henry.

(Interview with Rory)
When I was like nine, I made these horrible videos, and it was on my old, old, old channel and it was on my mum’s account. Let me find it for you [laughs]. It was really bad videos, like...

I only do it for fun, I don’t do it for money because if you do it for money and fame, then you won’t get any subscribers and people will know that you’re doing ...

I’ll do it myself, but like I’ll go on the internet and I’ll try and find it, like how to do it, and if it doesn’t work, like usual because I can never do it properly, I ask my sister because my sister’s a tech nerd too...

... when I finish editing and import my videos, my mum tells me whether the video’s good editing and good quality and if I should upload it or not
What is learning? (a sociocultural perspective)

- participation
- community
- becoming a member of an enduring collection of people mutually engaged in a shared endeavour
- shared purpose
- shared ways of working

identify formation
## What is learning? (a sociocultural perspective)

<table>
<thead>
<tr>
<th></th>
<th>Human learning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Why</strong></td>
<td>Pursue an interest - Achieve a personal goal</td>
</tr>
<tr>
<td>Motivation</td>
<td>Intrinsic</td>
</tr>
<tr>
<td><strong>When</strong></td>
<td>Flexible</td>
</tr>
<tr>
<td>Duration</td>
<td>Over prolonged period</td>
</tr>
<tr>
<td><strong>Where</strong></td>
<td>In context</td>
</tr>
<tr>
<td><strong>Who</strong></td>
<td>Teacher ‘Club’ members</td>
</tr>
<tr>
<td>View of learner</td>
<td>Has expertise, lacks experience</td>
</tr>
<tr>
<td>Role of teacher</td>
<td>Induct children into valued ways of being, orchestrating activities &amp; connecting to mature practices in the world</td>
</tr>
<tr>
<td><strong>How</strong></td>
<td>Becoming (role play)</td>
</tr>
</tbody>
</table>

Adapted from https://halfbaked.education/?p=63
### What is learning?

<table>
<thead>
<tr>
<th>Why</th>
<th>Human learning</th>
<th>Formal learning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pursue an interest - Achieve a personal goal</td>
<td>Qualifications</td>
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</table>

<table>
<thead>
<tr>
<th>Motivation</th>
<th>Intrinsic</th>
<th>Extrinsic</th>
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<table>
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<th>When</th>
<th>Human learning</th>
<th>Formal learning</th>
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<tr>
<td></td>
<td>Flexible</td>
<td>Timetabled</td>
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<table>
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<tr>
<th>Duration</th>
<th>Human learning</th>
<th>Formal learning</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Over prolonged period</td>
<td>Limited time per ‘topic’</td>
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</table>

<table>
<thead>
<tr>
<th>Where</th>
<th>Human learning</th>
<th>Formal learning</th>
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<tbody>
<tr>
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<td>In context</td>
<td>Decontextualised</td>
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<th>Who</th>
<th>Human learning</th>
<th>Formal learning</th>
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<tbody>
<tr>
<td>Teacher</td>
<td>‘Club’ members</td>
<td>More knowledgeable other</td>
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</table>

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<thead>
<tr>
<th>View of learner</th>
<th>Human learning</th>
<th>Formal learning</th>
</tr>
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<tbody>
<tr>
<td>Has expertise, lacks experience</td>
<td>Passive/‘ignorant’</td>
<td></td>
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<tr>
<th>Role of teacher</th>
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<th>Formal learning</th>
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<tr>
<td>Induct children into valued ways of being, orchestrating activities &amp; connecting to mature practices in the world</td>
<td>Guide/scaffold (at best) Tell (at worst)</td>
<td></td>
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</tbody>
</table>

<table>
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<tr>
<th>How</th>
<th>Human learning</th>
<th>Formal learning</th>
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<tbody>
<tr>
<td></td>
<td>Becoming (role play)</td>
<td>Being told, ‘doing’, (role play)</td>
</tr>
</tbody>
</table>
How we teach

Multiple approaches (aligned with ‘need’)
- Agentive participation
- & collaborative community

Sustained
- becoming a member of an enduring collection of people mutually engaged in a shared endeavour
- shared purpose

Direct instruction (≠didactic teaching)
- shared ways of working

Constructively critical bi-directional feedback

Trust

Bridge & induction

Enhance self-efficacy

Identify formation
Unpack elements of a better system

What should be learnt?
In 2033 which of these will be most important to have learnt?

<table>
<thead>
<tr>
<th>Art/Drama</th>
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</thead>
<tbody>
<tr>
<td>Handwriting</td>
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<tr>
<td>Scientific process</td>
</tr>
<tr>
<td>Computational thinking (problem solving)</td>
</tr>
<tr>
<td>Searching (inc. asking good questions &amp; evaluating information)</td>
</tr>
<tr>
<td>Grit</td>
</tr>
<tr>
<td>Statistics</td>
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<tr>
<td>Ethics &amp; Philosophy</td>
</tr>
<tr>
<td>Intercultural understanding</td>
</tr>
<tr>
<td>Learning to learn</td>
</tr>
<tr>
<td>Social and emotional 'skills'</td>
</tr>
<tr>
<td>Science facts</td>
</tr>
</tbody>
</table>
14 years ago (2005)
Technological challenges

Surveillance capitalism
(privacy/data ownership)

Biotechnology & genetic engineering

Robotics, AI and cyborg engineering
Automation & employment

47% of all US employment could be automated over the next 10 to 20 years

(Frey & Osborne 2013)

To suggest that technology is going to somehow create completely new job categories capable of absorbing millions of workers displaced from traditional jobs is pure fantasy.

(Ford, 2009, p. 61)
Attitudes towards migration

Demographic & environmental challenges

Resource sustainability, pollution and global warming

Population growth & changing demographics
The curriculum
Identity
Passion (Purpose)
Self-esteem

Success
Recognition

Flexibility
Resilience
Persistence
<table>
<thead>
<tr>
<th>Identity</th>
<th>Participation</th>
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<tbody>
<tr>
<td>Passion (Purpose)</td>
<td>Values</td>
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<tr>
<td>Self-esteem</td>
<td>Diversity</td>
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<tr>
<td>Success</td>
<td>Cultural understanding</td>
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<td>Recognition</td>
<td>Equity</td>
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Identity
- Passion (Purpose)
- Self-esteem
- Success
- Recognition
- Flexibility
- Resilience
- Persistence

Agency
- Problem solving
- Creativity
- Critical thinking
- Collaboration
- Multi-modal communication
- Numeracy (e.g. stats, finance)
- Digital literacy
- Philosophy & ethics

Participation
- Values
- Diversity
- Cultural understanding
- Empathy
- Equity
- Rights
- Sustainability

Learning to learn

The curriculum
The curriculum

Identity
Passion (Purpose)
Self-esteem
Success
Recognition
Flexibility
Resilience
Persistence

Agency
Problem solving
Creativity
Critical thinking
Collaboration
Multi-modal communication
Numeracy (e.g. stats, finance)
Digital literacy
Philosophy & ethics

Participation
Values
Diversity
Cultural understanding
Empathy
Equity
Rights
Sustainability

Learning to learn
Summary so far

Pedagogical approach
Enhances human learning

Curriculum

Identity  
Passion (Purpose)  
Self-empowerment  
Success  
Resilience  
Flexibility  
Persistence

Agency

Problem solving  
Creativity  
Critical thinking  
Collaboration  
Multi-lingual communication  
Numeracy (e.g. stats, finance)  
Digital literacy  
Philosophy & ethics

Learning to learn

Participation

Values  
Diversity  
Global understanding  
Empathy  
Equity  
Rights  
Sustainability
Unpack elements of a better system

Thinking more radically
But this is not enough

“We need to return to the DNA of schools, their claim to act as a resource for helping students, communities and societies to thrive in the future.”

(Facer 2011 p.134)
Open ... to people

Lifelong learning (not just 4 to 18) Value older people
Open … when needed

24/7 (not 8.30 to 3.30) Flexible
Open to the community

At the heart of
Summary

Open to people

Open when needed

Enhances human learning

lifelong learning (not just 5 to 18)

24/7 (not 8.30am to 3.30pm)

through impacting their communities
not school, not home

the education system for the automation age

Learning to learn
Strategies for getting there?
Disruptive change

New entrants have to catch up to compete

Existing performance that customers can utilise

Incumbents nearly always win

Disruptive innovations

Adapted from Christensen et al 2008 p.46 Disrupting Class: how disruptive innovation will change the way the world learns. London: McGrawHill.
Disruptive change

Incumbents nearly always win

Existing performance that customers can utilise

Disruptive innovations: competing against nonconsumption

Entrants nearly always win

Adapted from Christensen et al 2008 p.46 Disrupting Class: how disruptive innovation will change the way the world learns. London: McGrawHill.
Big picture - Australia

Mainstream school

Standard programme

Apply

Big Picture Academy

The elephant in the room

Assessment
Summative Assessment
Traditional metrics

Terminal exams
Alternatives – AI (data mining)

Major ethical issues:
• Data ownership
• Transparency / bias
Alternatives – Point of learning

https://halfbaked.education/?p=199

PoL

<table>
<thead>
<tr>
<th>Self</th>
<th>Peer</th>
<th>Assessor</th>
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Multiple/ongoing claims by multiple people
Alternatives – open access (no entry requirements)
Conclusions
Key points (take aways)

• Humans are learning beings – teaching should enhance how we learn
• What we teach should empower people to act and influence the future
  • Knowledge + Skills + Attributes
• Culture of high stakes assessment is key barrier
  • Refocus on learning not gaming the system
• Need paradigm shift
  • From distrust and coercion to trust and support

Strategy
Low hanging fruit
Devise new metrics
Refine model
Demonstrate efficacy

not school, not home
the education system for the automation age
Schooling currently is a problem

Solutions exist

Does the political will?
Follow up

The halfbaked.education blog
Emerging ideas about education for discussion and debate

not school, not home

schoome
the education system for the automation age

www.schome.ac.uk