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## How can skill levels be raised to meet the needs of society and the economy?

Sir Mark Walport

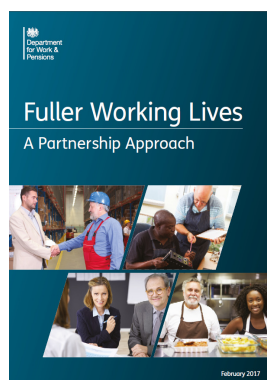
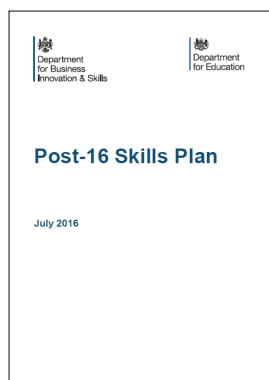
Chief Scientific Adviser to HM Government

*The Foundation for Science and Technology, 01 March, 2017*



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## Skills and Lifelong Learning





## Current challenges

1. Low skills equilibrium
2. Skills underutilisation
3. Poor work-readiness
4. Poor literacy and numeracy among young adults
5. Decline in adult learning



## Low skills equilibrium

		Low	SUPPLY	High	
DEMAND	High	<b>SKILLS GAPS AND SHORTAGES:</b> <ul style="list-style-type: none"> <li>• High wage/high productivity jobs</li> <li>• Low educational attainment &amp; skills               <ul style="list-style-type: none"> <li>• High proportion skilled employees needed</li> </ul> </li> <li>• In-migration of skilled workers</li> </ul>		<b>HIGH SKILLS EQUILIBRIUM:</b> <ul style="list-style-type: none"> <li>• High wage/high productivity jobs</li> <li>• High educational attainment &amp; skills               <ul style="list-style-type: none"> <li>• High employment</li> </ul> </li> <li>• High proportion skilled jobs</li> <li>• Balanced migration</li> </ul>	
	Low	<b>LOW SKILLS EQUILIBRIUM:</b> <ul style="list-style-type: none"> <li>• Low wage/low productivity jobs</li> <li>• Low educational attainment &amp; skills               <ul style="list-style-type: none"> <li>• Employment rate cyclical</li> <li>• Skilled Out-migration</li> </ul> </li> </ul>		<b>SKILLS SURPLUS:</b> <ul style="list-style-type: none"> <li>• Low wages/low productivity jobs</li> <li>• High educational attainment and skills               <ul style="list-style-type: none"> <li>• Low share of high skilled jobs</li> <li>• High unemployment rate (of skilled workers)                   <ul style="list-style-type: none"> <li>• Out-migration</li> </ul> </li> </ul> </li> </ul>	

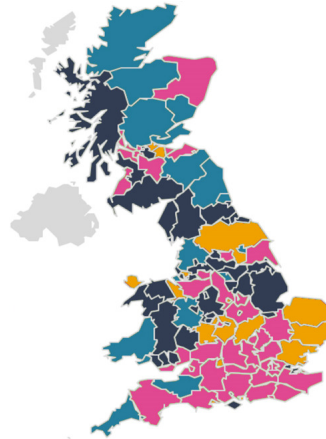
Characteristics of low and high demand and supply of skills (OECD, 2009)



## Regional disparities in skills supply/demand

1 Low Skills Equilibrium

- high skills equilibrium**
- Higher % post-secondary school education & higher GVA
- skills deficit**
- Lower % post-secondary school education & higher GVA
- skills surplus**
- Higher % post-secondary school education & lower GVA
- low skills equilibrium**
- Lower % post-secondary school education & lower GVA



UK variation of skills supply & demand (OECD, 2013)



## Low skills equilibrium

1 Low Skills Equilibrium

- Sectors: hospitality, retail & social care
- **Improve training standards e.g. introduce professional certification**
- **Support firms to up-skill e.g. Scottish care homes**
- **Encouraging employer investment in higher skills e.g. Apprenticeship Levy**

### LOW SKILLS EQUILIBRIUM:

- Low wage/low productivity jobs
- Low educational attainment & skills
- Employment rate cyclical
- Skilled out-migration

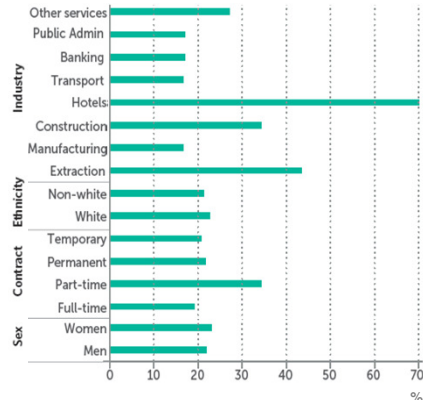


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## Skills underutilisation

- Half UK employees report own skills > job requires
- Sectors: hotel & construction
- Reduced well-being & aspirations
- **Develop LEO dataset to collate demand data to inform careers guidance**
- **Employers to design jobs to optimise employee skills**

2 Skills Underutilisation



Percentage of UK graduates self reported as over-qualified (Cedefop, 2012) [n=3200]

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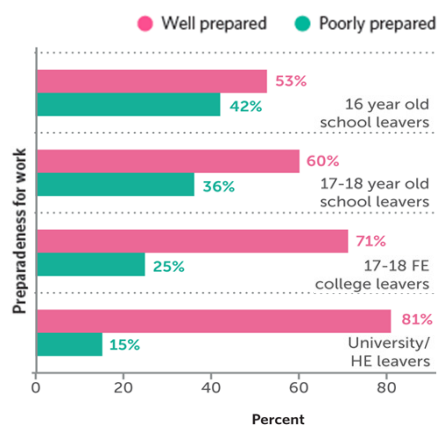


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## Poor work-readiness

- Preparedness improves with level of qualification & age
- Lack of socio-emotional skills e.g. confidence & resilience in young recruits
- **Promote & embed work experience in educational courses e.g. Govt Traineeship Programme**
- **Employer-led initiatives that tailor education to their needs**

3 Poor work-readiness



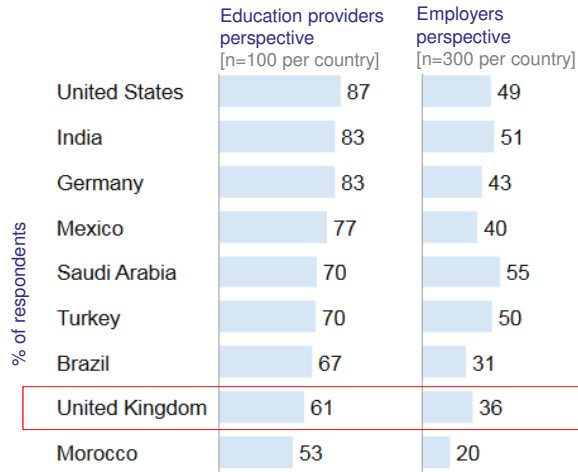
English employer rating of preparedness of education leavers for work (UKCES, 2014) [n>1350]

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## Work-readiness weak in international comparisons



Perceptions of adequate preparedness of new hires / graduates (Barton et al, 2012)

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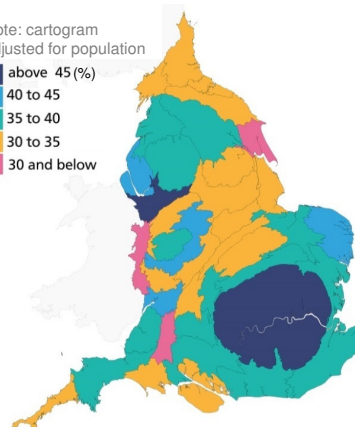
3 Poor work-readiness



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## Only around a third of employers offer work experience

Note: cartogram adjusted for population



Employers offering work experience in last 12 months, 2014 (UKCES, 2015) [n=10000]

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3 Poor work-readiness

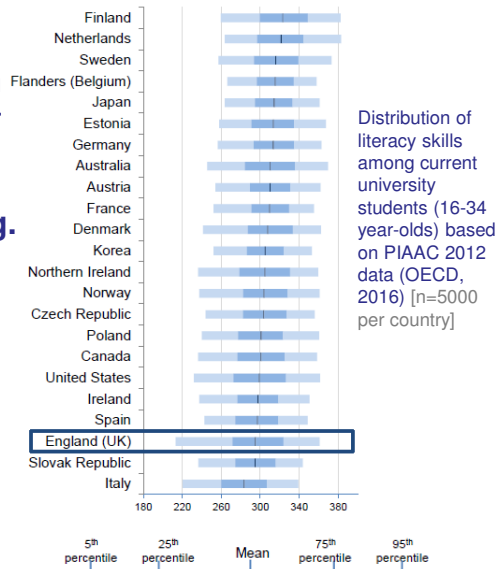


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## Poor literacy & numeracy for young adults

4 Poor literacy and numeracy for young adults

- Relatively high proportion of HE students have poor literacy & numeracy
- ‘On-the-job’ learning e.g. Army reports good results for low skilled
- Promoting parent with child learning
- Embed literacy & numeracy within vocational courses



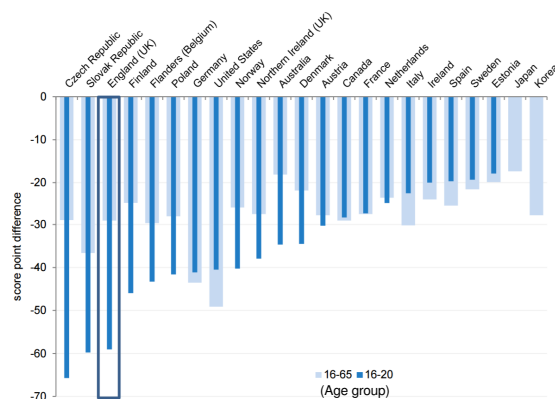
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## Parental education strongly impacts numeracy skills of young people

4 Poor literacy and numeracy for young adults



Score point difference in numeracy skills of individual where at least one parent is secondary school educated relative to individuals where neither parent are. Based on PIAAC 2012 data (OECD, 2016) [n=5000 per country]

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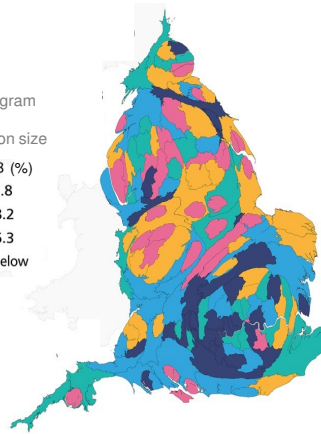
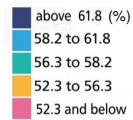


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## Parts of London & South East perform better than parts of East Midlands

4 Poor literacy and numeracy for young adults

Note: Cartogram distorted for population size



Percentage of pupils achieving 5 or more A\*-C GCSEs including English and Maths (Schooldash Ltd., 2015) in England [N=4388 schools]

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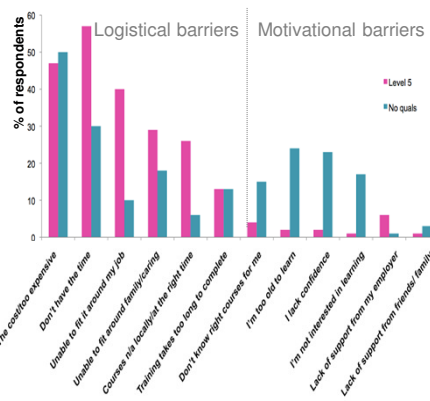


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## Decline in adult learning

5 Decline in adult learning

- 1 in 3 adults not engaged with learning since school
- Previously successful learners more motivated
- Fall in workplace training & adult FE & HE numbers
- **Target disengaged learners via community & family-led programmes**
- **Awareness-raising campaigns & guidance**

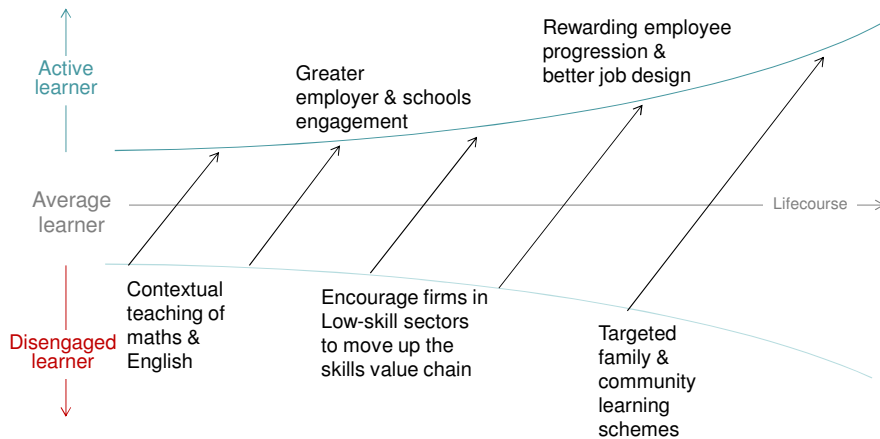


Potential obstacles to learning & stated reasons for not learning by current qualification (% of respondents) (McNair, 2012) [n=5000]

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## How can we lift the individual's learning trajectory?



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- Vehicle for economic prosperity, facilitates social mobility, inclusion & wellbeing
- DfE priority
- Local & national skills needs important
- Consultation responses to Green Paper critical



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