The Institute of Coding: Addressing the UK Digital Skills Crisis

Institute of Coding
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`https://instituteofcoding.org/`

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So What's the Problem?

Superficially, things look good:

"the digital sub-sector will need 518,000 workers for roles in the three highest skilled occupational groups. However, over the last ten years only 164,000 individuals graduated from a first degree in computer science." [UKC15, p. 74]

"In this context, apparently high rates of unemployment amongst graduates of Computer Sciences and other STEM courses demanded an explanation" [Sir16]

DLHE figures of 11.7% versus 8.4% for STEM (7.6% for "Rest of STEM"). Much of this can be explained by he fact that Computer Science *is* different.

Computer Science is different

At least in terms of where it recruits and is done.

	Phys. Sci	Maths	Comp. Sci.	Engineer	All Subj
Russell Group	34260	18480	13290	40880	407495
	8.4%	4.5%	3.3%	10.0%	
Univ. Alliance	13350	7470	24850	26715	389100
	3.4%	1.9%	6.4%	6.9%	
Million Plus	2580	195	11480	8890	171590
	1.5%	0.1%	6.7%	5.2%	
Total	73325	36590	79480	115295	1597825
	4.6%	2.3%	5.0%	7.2%	

Note that many universities are in no group.

BME 32% as against all STEM 27% (rest of STEM 26%)

LPN 13% as against all STEM 9% (rest of STEM 8%)

women 16% as against all STEM 35% (rest of STEM 40%)

Hence a specific response

The Institute of Coding,

- Announced George Osborne November 2015 [Her15]
- * Somehow morphs from UK-wide to England-only
- Competition launched by BEIS/HEFCE March 2017 [Dep17]
- Announced by PM at Davos January 2018 [Her18]
- * HEFCW decides to join

Currently 27 university partners, and so many industrial that the letters of support overflowed HEFCE's mailbox.
Whole project divided into five themes.

Theme 1: University learners

1. Co-designed industry standard
2. Degree programmes, e.g. Data Science, CyberSecurity
3. Curriculum innovation
4. Training for work-readiness
5. Extra-curricular innovation
6. Innovative spaces
7. Use of analytics for enhancement
8. Learner records

Theme 2: The digital workforce

1. Alternative delivery models
2. Specialist provision
3. Generalist provision
4. Education training

Theme 3: Digitalising the professions

1. Modular digital masters programme
2. Short tasters

Theme 4: Widening participation

1. Creating a pipeline
2. Tailored, inclusive curricula
3. Flexible delivery models
4. Understanding barriers
5. Sharing good practice

Theme 5

1. Digital Skills Observatory
2. Conferences, events and media: First Conference 10-13 March 2019, Manchester
3. Long-term sustainability
4. Educating the educators
5. Future Projects Fund (call closed December 2018)

📄 Department for Business and Energy and Industrial Strategy.
Higher Education Funding for 2017-18 (letter to HEFCE).
http://www.hefce.ac.uk/media/HEFCE,2014/Content/News/2017/Grant-letter-2017.pdf, 2017.

📄 Her Majesty's Government.
Chancellor's speech to GCHQ on cyber security: Chancellor lays out new plan for £1.9 billion cyber investment, and details seven more departments that have settled ahead of the Spending Review.
https://www.gov.uk/government/speeches/chancellors-speech-to-gchq-on-cyber-security, 2015.

📄 Her Majesty's Government.
PM's speech at Davos 2018: 25 January [2018].
https://www.gov.uk/government/speeches/pms-speech-at-davos-2018-25-january, 2018.

📄 Sir Nigel Shadbolt.
Shadbolt Review of Computer Sciences Degree Accreditation and Graduate Employability.
https://tinyurl.com/shadboltreview2016, 2016.

📄 UKCES.
Sector insights: skills and performance challenges in the digital and creative sector.
https://tinyurl.com/ukcessector2015, 2015.