BCS Learning & Development SG

Early Careers: Entering A Digital Or ICT Career

THIS WEBINAR WILL BE RECORDED

PLEASE PUT QUESTIONS INTO QUESTION BOX OR CHAT

WILL BE STARTING AT 7PM
Early Careers
Entering A Digital Or ICT Career

• Upskilling and reskilling landscape
• Role of Institutes of Technology

Ken Gaines MBCS
Digital and ICT Sector Technical Adviser – City & Guilds

Dr Ismini Vasileiou
Associate Professor Of Information Systems
Associate Head Of School Of Computer Science And Informatics
Coping With An Increasing Digital World

Ken Gaines
Technical Adviser – Digital And ICT Skills

City & Guilds
E: ken.gaines@cityandguilds.com
What is an Early Career?

• 16 – 19 year’s old on full-time course or apprenticeship?
• 19+ on apprenticeship or Higher Education programme?
• Anyone starting out learning about Digital and ICT?
• Anyone moving from support roles to engineer or developer roles?
• Anyone changing career from anywhere to Digital and ICT?
• Anyone moving to a totally different area of Digital and ICT?
• Anyone moving into managing people in Digital and ICT?
• ALL OF THE ABOVE
BCS mission of Making IT Good for Society is rooted in Royal Charter

“To promote and advance the education and practice of computing for the benefit of the public”
Digital literacy and inclusion

What we know about the problem

11.3M
UK adults don’t have the 5 basic digital skills defined by government
(4.3m have none)

11%
of 18-29 year old's say they developed their digital skills at school

£5.5Bn
cumulative benefit of boosting digital inclusion of 694,000 individuals each year

75%
of employers won’t consider a candidate with no IT skills

~25%
of users aged 8-15 believe that if a website is listed by a search engine it can be trusted
Issues

▪ By 2023, the number of active citizen developers at large enterprises will be at least four times the number of professional developers (MuleSoft)

▪ 60% of LoB users admit that failure to overcome challenges associated with connecting IT systems, applications, and data will hinder automation initiatives (MuleSoft)

▪ Data breaches have double over the last year due to web application vulnerabilities (Contrast Security)

▪ BT to take on 7,000 cable installers

▪ Growth of AI

▪ Ransomware attacks in the UK continue to grow at an alarming rate (Contrast Security)

▪ Focus on Digital Literacy!!!!
Government initiatives

- **Restart programme**
  - Upskilling/reskilling unemployed – must stay in job for 6 months
  - Funded by Department of Works and Pension (DWP)

- **Adult Education Budget – 2021-22**
  - Earns less than £345 a month - learner is sole adult benefit claimant
  - Earns less than £552 a month for learners on a joint benefit claim.

- **Apprenticeship incentives**
  - Employers will receive £3,000 for new apprentices of any age.

- **Lifetime Skills Guarantee and Level 3 Adult offer**
- **New adult offers and Mayoral Combined Authority**
Restart

Supporting her retraining and reskilling to create a bridge back into employment

Employability & Well-being
- Initial diagnostics
  - Assessment of individual learner needs and personalised support
- Digital Skills
  - Collaborative technologies, using the internet, IT user fundamentals etc...

Employer Engagement
- Step Into Digital Technologies
  - Industry overview provides insight into how to be successful along with details of local (available) job market

Qualification
- City & Guilds
  - Level 2 Certificate
    - ICT Systems Support
- City & Guilds
  - Level 2 ILM Award
    - Recognises Jacinda’s abilities as a Team Leader

Funded by AEB
- OUTCOME 1
  - Jacinda accepts a new role in Digital and ICT Support

Apprenticeship
- Jacinda begins a Digital Support Technician apprenticeship, which continues for 12 months beyond the Restart timeline

Funded by LEVY
- OUTCOME 2
  - Jacinda remains engaged and in employment for 6 months

City & Guilds Restart programmes are designed to support outcome payments and maximise additional funding opportunities

*Labour Market Intelligence

Jacinda develops a successful new career in Digital and ICT Technology

OUTCOME 1
Jacinda accepts a new role in Digital and ICT Support

OUTCOME 2
Jacinda remains engaged and in employment for 6 months
Find out more about Adult Skills funding and needs

Step Into Digital Technologies
Industry overview provides insight into how to be successful along with details of local (available) job market

https://www.futurelearn.com/courses/step-into-digital-and-it

Adult Skills - Funding  https://www.cityandguilds.com/delivering-our-qualifications/funding/adult-skills
Restart - Funding  https://www.cityandguilds.com/delivering-our-qualifications/funding/restart

Digital poverty  https://cityandguildsfoundation.org/digital-poverty/

Shifting Skills: reskilling key to post-Covid recovery
https://cityandguildsfoundation.org/2020/10/shifting-skills/

New bursary launched to help Londoners get back into work
https://cityandguildsfoundation.org/2021/05/new-bursary-launched-to-help-londoners-get-back-into-work/

Cisco Talent Bridge  https://www.netacad.com/careers/talent-bridge
The Role Of The Institutes Of Technology

Dr Ismini Vasileiou
Associate Professor Of Information Systems
Associate Head Of School Of Computer Science And Informatics

De Montfort University
Institute of Technology (IoT) Purpose and model

• IoTs combine FE, HE and employers through a new prestigious distinct entity to deliver STEM-focused technical knowledge and practical skills in state-of-the-art facilities to address local, regional and national skills/productivity gaps.

• Aimed to engage those progressing from T Levels, A Levels and workers of all ages wishing to upskill and retrain.

• All new IoTs will need to achieve the high-quality standards demonstrated by those successful in Wave 1.
IoT more than just qualifications

Governance, leadership and curriculum design/delivery
IoT Objectives

• Significantly increase the number of learners with higher technical skills which are crucial to national, regional and local productivity growth;

• Attract a wide range of learners to maximise the social as well as the economic impact of this new type of institution; and

• Improve the occupational competency of learners to meet the needs of employers now and in the future.
IoT success factors
All IoTs must meet the following factors:

1. Strong employer engagement in governance and leadership as well as the design and delivery of the curriculum.
2. Specialise in teaching technical STEM disciplines, at Level 4 and above, creating a technical education pathway to high skilled, high wage employment.
3. Offer high quality industry-relevant teaching, using industry-standard facilities and equipment.
4. Be responsive and agile in meeting the current and future needs of local, regional and national industries, including upskilling the current workforce.
5. Create a prestigious and distinct identity for both the institution and the offer to learners.
6. Work collaboratively to harness the assets, resources and expertise of employers and FE and HE providers.
7. Be financially viable, resilient and credible.
Leicester & Leicestershire IoT model

Core Employers

- **AIRBUS**: Advanced Manufacturing and Engineering, Aerospace, Cyber
- **IBM**: Data Science
- **Reaction Engines**: Advanced Manufacturing and Engineering, Aerospace
- **WSP Engineering Ltd**: Advanced Manufacturing and Engineering

**Leicester and Leicestershire Institute of Technology**
Space, Digital and Advanced Manufacturing & Engineering

Core Partners

- National Space Centre & Academy

**HE Partners**

- Cyber and Digital, Data Science - Apprenticeships Levels 4, 5 and 6
- Space and Engineering & Manufacturing – Provision at Levels 4, 5 and 6

**FE Partners**

- Digital, Engineering & Manufacturing and Space – Apprenticeships, HNCs, HNDs and T Level Provision at Levels 3, 4 and 5
- Engineering and Manufacturing HNCs, HNDs – Provision at Levels 4 and 5

Outreach

- EDT
- Industrial Cadets
- TEENTECH
- WISE

Key Stakeholders

- Leicester City Council
  - SMART Leicester
  - Connected People and Places
  - Inward Investment Team

- North West Leicestershire Learning Partnership
  - Gateway
  - LEAD (Learning and Employment Alliance for Development)
  - L&N
  - FE&DF (Further Education & Development Forum)
  - CATAPULT
  - Satellite Applications Catapult

bcs.org
### Digital

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<th>Data Technician</th>
<th>UoL</th>
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<tr>
<td></td>
<td>Data analyst</td>
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<td>DevOps engineer</td>
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<td>B business analyst</td>
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<td>Software tester</td>
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<td></td>
<td>BTEC Higher National Certificate in Computing</td>
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<td>Cyber Security Technologist</td>
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<td>HNC in Cloud Computing</td>
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<td>HNC in Information Technology</td>
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<td>Network Engineer</td>
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<td>Software Developer</td>
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<td>BTEC Higher National Diploma in Computing</td>
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<td>HND in Cloud Computing</td>
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<td>HND in Computing (Software Engineering)</td>
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<td>HND in Information Technology</td>
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<td></td>
<td>Data scientist (integrated degree)</td>
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<td>Digital and technology solutions professional (integrated degree)</td>
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<td>Artificial intelligence (AI) data specialist</td>
<td>DMU</td>
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### Engineering / Space

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<tr>
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<td>HNC in Manufacturing Engineer</td>
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<td>Engineering Manufacturing</td>
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<td>Automation and controls engineering technician</td>
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<td>Design, construction management and initial verification of electrical installations</td>
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<td>Engineering Manufacturing Technician</td>
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<td>Space Engineering Technician</td>
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<td>BTEC Higher National Diploma in Mechanical Engineering</td>
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<td>HNC in Aerospace Engineering</td>
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<td>HNC in Instrumentation and Control Engineering</td>
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<td>HNC in Mechatronics Engineering</td>
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<td>BTEC Higher National Diploma in Operations Engineering</td>
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<td>BTEC HND Diploma in Electrical and Electronic Engineering</td>
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<td>Aerospace Software Development Engineer</td>
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<td>Space Systems Engineer</td>
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<td>Systems Engineer</td>
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Questions

Kevin Streater
Chair
Thank-you