



University of
Salford
MANCHESTER

Addressing the technical skills gap through the Greater Manchester Institute of Technology (GMIoT)

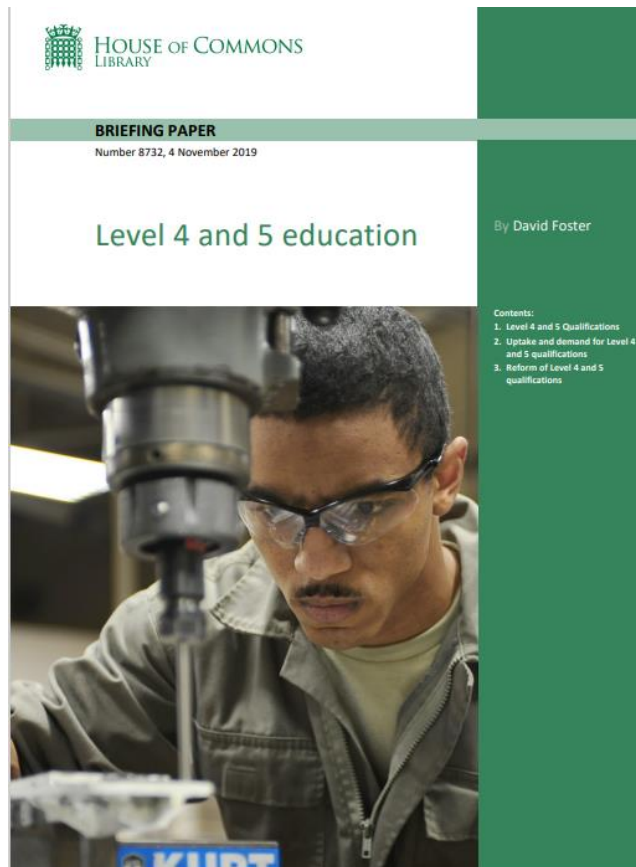
Professor Nigel Linge
(Professor of Telecommunications)



Skills gap



University of
Salford
MANCHESTER



UK surveys have identified an un-met demand for higher technical skills.

There is a shortage of technician-level STEM skills.

- undersupply of people with level 3-5 vocational qualifications over the last 20 years.
3 = Further Education; 4,5,6 = Higher Education = University (1st year, 2nd year, degree)

Take-up of Level 4 and 5 qualifications is low in England compared to other countries.

- 10% of all adults aged 18-65 hold a level 4-5 qualification as their highest, compared to 20% in Germany and 34% in Canada.

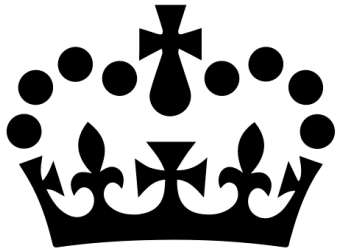
The demand for higher level technical skills is also expected to increase, with sectors employing highly skilled workers expected to grow most rapidly.

Skills gaps at the higher technical level may be “holding back the productivity of the workforce” and contributing to the UK’s productivity ‘gap’ with its leading competitors.

Institutes of Technology



University of
Salford
MANCHESTER



GOV.UK

Institutes of Technology (IoTs) are collaborations between further education (FE) providers, universities (HE) and employers.

Specialise in delivering higher technical education to help employers get the skilled workforce they need.

IoTs focus on delivering higher level technical skills (mainly at levels 4 and 5) in science, technology, engineering and mathematics (STEM) sectors where employer demand is greatest.

Centred around real-world learning, courses are mapped to live projects, which means that the relationship between curriculum and industry practice is clearer than in more traditional education.

Greater Manchester Institute of Technology (GMIoT)



University of
Salford
MANCHESTER

Opened in September 2023.

The GMIoT will offer a range of courses, including Higher National Diplomas (HNDs) and apprenticeships, as well as digital and technical skills boot camps and short courses designed to fast track learners into jobs in growth sectors for Greater Manchester.

The GMIoT will operate on a hub and spoke model, with a new centre at the University of Salford and hubs across Greater Manchester.

“In Greater Manchester we have the simple premise that there is a path for all in life – there is not one better path and one inferior path, there is a need to create equal paths, technical and university, to the qualifications that young people will need.”



Greater Manchester Institute of Technology (GMIoT)



University of
Salford
MANCHESTER

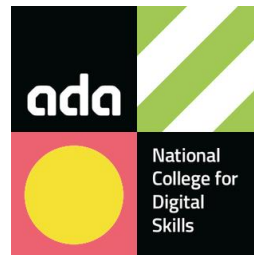
Greater Manchester IoT



University of
Salford
MANCHESTER

LAING O'ROURKE

SIEMENS
Ingenuity for life



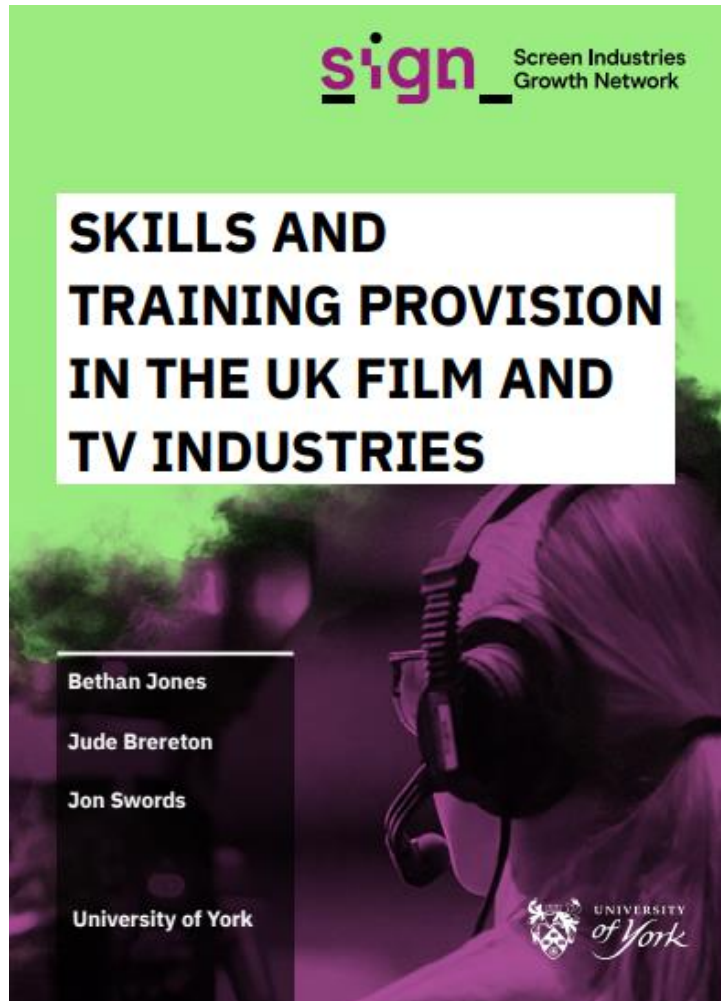
TalkTalk



Broadcast Industry skills gap



University of
Salford
MANCHESTER



The creative industries, including film, TV and gaming as well as theatre, museums and galleries, were worth more than £115bn to the UK economy

Technical skills are a key area for concern, with things like virtual production fundamentally changing the way that film and television are produced.



‘Here’s a statistic that’s pretty mind-blowing: in recent years, the [creative] industries have delivered more economic value than life sciences, aerospace and the automotive sectors combined. And yet skills, and the people who have the right ones, are currently the biggest single inhibitor of growth.’

Broadcast Industry skills gap



University of
Salford
MANCHESTER



Tim Guilder, Head of Production Technology seeks new talent that wants to understand how things like IP works in TV production.

“With the 40% uptake in video delivery that we are trying to make, we’ve got a lot of content that needs to be produced. We need the technical people to help facilitate that.”



John Ellerton leads BT Media & Broadcast

“Broadcast hardware is being replaced with software on processors and in turn software is becoming virtualised in cloud and data centres enabling efficient reuse.

But underlying all this is a noticeable shift in skills and knowledge. We're now entirely dependent on IT engineering to be competitive, and it's clear we've got a big skills gap.

Content may be king, but our ability to get the right content to consumers at the right price-point and on the right devices is the key to success and we need to make sure we attract and train the brightest talent from across society to ensure we thrive.”

We debated this at the 57th FITCE Congress in 2018



University of
Salford
MANCHESTER



FITCE Congress 2018

[<< go back to Events](#)

57th FITCE Congress, UK 2018

Delivery and Consumption of Digital Media

6-7 September 2018, MediaCityUK, Salford



University of
Salford
MANCHESTER



BT Sport



Innovation
Network



HUAWEI

doc<10

https://www.engagingwithcommunications.com/events/fitce_congress_2018_home.html

HND Media and Network Systems



University of
Salford
MANCHESTER

Addressing the need for engineers who have a fluency in network, internet, broadcast and IP technologies.

This HND builds upon our core strengths in these areas, exploits our position at MediaCityUK and will prepare students with the new skills required within a broad range of television and media companies.

Students graduating from the HND will be ideally suited to join core engineering and networking teams focused on operations.



HND Media and Network Systems (Level 4)



University of
Salford
MANCHESTER

Learn fundamental principles that underpin media broadcast systems and networking:

- Develop practical experience of configuring a network, creating television content, and streaming media;
- Learn the fundamentals of computer operating systems and software development and develop associated practical programming skills;
- Learn how to work within a team and develop technical reporting skills.

Principles and Concepts
of Network Technology

Audio and Video
Principles and Practice

Media Technologies
Evolution and
Implementation

Python and Linux

Television Practice

IP Acquisition and
Distribution Systems

HND Media and Network Systems (Level 5)



University of
Salford
MANCHESTER

Learn the detailed operation and management of media capture, storage, and distribution systems:

- Learn how to configure and analyse how data traffic is routed through a network.
- Learn the detailed technical aspects that impact the viewer experience and associated relevant industry standards;
- Learn the relevance and importance of cyber security within the context of an online media distribution system;
- Develop practical experience of working within a group to undertake the design of a complete media distribution system to meet a given user requirement.

Routing and Switching

Transmission and
Streaming Practice

Systems Control and
Administration

Acquisition and Tapeless
Workflows

Media Systems Security

System Group Design
Project

HND Media and Network Systems - Teaching and Learning Approach



University of
Salford
MANCHESTER

A blended approach to content delivery and assessment but with a clear focus on developing practical skills.

Delivery:

- Lectures – convey core technical and theoretical principles
- Practical – allow students to put theory into practice and gain experience in how to configure hardware and write software
- Seminars – external industry experts provide a real-world context
- Case-studies – ‘live briefs’ allow students to explore real-world industrial applications
- Group work – used to develop team working and communications skills
- Projects – enable students to develop their analysis, design and practical implementation skills

Assessment:

- Multiple choice examinations – assess understanding of basic principles
- Practical assessments – assess practical competence
- Written assignments – individual and group-based project work
- Oral presentations – develop and hone presentation skills

HND Media and Network Systems - Teaching and Learning Approach



University of
Salford
MANCHESTER

Claire Foreman, Director of the Greater Manchester Institute of Technology:

“When it comes to technical education, I think as a country we have neglected it, and it is fantastic that this initiative puts it back on the map for the people and the businesses of Greater Manchester.”

“University education is not strictly academic or strictly technical, it is often a blend of both when it comes to preparing people for life beyond university.”

Thank you



University of
Salford
MANCHESTER

Nigel Linge



n.linge@salford.ac.uk



Nigel Linge

www.salford.ac.uk

