

Case study of effective practice 2012/13

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Teaching and learning

City & Islington College: Industry ‘Fit for Purpose’ Engineering Qualifications

City and Islington College (CANDI)

Project title: **Industry ‘Fit for purpose’ engineering qualifications through collaboration and effective employer engagement**

Themes: **Curriculum development; Careers in STEM; Employer Engagement**

“Engineering has been identified by the government as a high-growth industry, and the impact of climate change and the Green Deal means that environmental engineering will be of particular importance to the UK economy.

“The Higher Apprenticeships in Engineering Environmental Technologies aims to meet increasing demand.”

Summary

This case study describes the processes and partnerships needed in developing a Higher Apprenticeship in Engineering Environmental Technologies.

It looks at:

- the challenges and benefits of working with an extensive range of partners and stakeholders and fostering cross-sector innovation
- Raising awareness of the new Apprenticeship, through the promotion and marketing of the qualification to the sector
- Ways of supporting providers and employers to take part in apprenticeships .

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About the college

City and Islington College is a further education college located in Islington, London based on five sites across the borough. It offers over 800 courses and has 18,000 students.

The College has been awarded Beacon status by the Learning and Skills Council. It was also labelled as “Outstanding” in a recent Ofsted report and is the first further education college in the country to win the Queen’s Anniversary Prize twice.

The challenge

1. A recognised lack of higher apprenticeships in environmental technologies within the sector

A Higher Apprenticeship has been developed by City and Islington College supported by Sector Skills Councils: SEMTA, Summit Skills, and Construction Industry Council (CIC) on behalf of Construction-Skills. The awarding body for the qualification is Pearson. Employers including Babcock International, ICI, Dulux, MITIE and Balfour Beatty have played a key

role in shaping the Higher Apprenticeship to ensure its relevance to the needs of a wide range of engineering-based businesses, from large employers to supply-chain SMEs. Industry bodies and diversity groups such as WISE (Women in Science and Engineering) have also been consulted.

The Apprenticeship is being developed in response to concerns from employers that the country is suffering a major skills shortage in the engineering sectors – current estimates put the gap at around 42,000¹.

Engineering has been identified by the government as a high-growth industry, and the impact of climate change and the Green Deal²

means that environmental engineering will be of especial importance to the UK economy.

2. Limited progression from Level 2 and 3 onto Higher Apprenticeships - progression pathways

A key proposal in the government’s Plan for Growth (March 2011), was to increase Higher Apprenticeship places. The driving factor in our work was the aim to create an engineering technologies offer that aligned to demand and need and provided progression, whilst also widening opportunities for employment.

3. A Lack of qualifications ‘fit for purpose’ following the Richard review

One of the recommendations following the Doug Richard Review is for employers to be given more control over apprenticeships.

Employer led, quality driven: “Set by employers - framework fit for purposes” - Doug Richard Review

The government wants employers to be more closely involved in developing new

Footnotes:

1. Engineering companies are projected to have 2.74 million job openings from 2010 – 2020, 1.86 million of which will need engineering skills. There will be demand for around 69,000 people qualified at advanced apprenticeship or equivalent level each year. Yet only around 27,000 UK apprentices a year currently qualify at the appropriate level.

2: [Government Green Deal](#)

apprenticeships to ensure recognised industry standards are established and are at the heart of every apprenticeship.

The activity

City and Islington College won the bid to develop the Higher Apprenticeship in Engineering Environmental Technologies in June 2012. Since the launch of The Higher Apprenticeship Fund in July 2011, approximately 30 partnerships have been awarded funding to develop and implement the Higher Apprenticeship frameworks in a number of occupational areas. The Higher Apprenticeships in Engineering Environmental Technologies aims to meet increasing demand for high level environmental engineering skills to tackle the impact of climate change and to satisfy legislation.

The project had several distinct stages in its life cycle which started at the end of August 2012 and is due to be completed by the end of March 2013 with the acceptance of the qualification on to QCF framework.



- Engagement and Development

The first stage was to bring together a large and wide ranging group of partners and stakeholders. With such a wide range of partners, all with their own priorities, bringing them together to develop the qualifications was one of the biggest challenges we faced. (See list of partners below.) Identifying and getting the right person in each of the employer organisations to work with, was one of the first priorities. Did we need someone from HR, shop floor or senior management? Would that person be able to commit the time needed to work with us, to develop the qualifications and give us valuable feedback to shape and refine the qualification as we went along? These were just some of the questions we needed to address.

What we learnt from this was to engage early, set

realistic time lines and be prepared to be flexible. This approach was vital given the complexity of the task and number of partners involved. A range of contact methods were employed: focus groups, meetings, telephone calls and remote communication and online surveys, in order to engage as many people as possible. One of the methods that proved most effective in consulting and getting feedback from our employers, was to set up lunchtime meetings in convenient locations and provide interesting lunches.

These meetings proved very successful, allowed for lots of informal networking to take place between the different stakeholders and strengthened our links with national and local employers. An example of this was the feedback we received on the original Construction and Building Services proposed pathway. Several employers

List of partners

- Babcock International
- Balfour Beatty
- Bradford College
- City and Islington College
- City College Norwich
- ICI, Dulux, MITIE
- Isle of Wight College
- Sector Skills Councils: SEMTA, Summit Skills and Construction Industry Council (CIC) on behalf of Construction-Skills.
- Sheffield College
- South Nottingham College
- The awarding body is Pearson
- Training Providers
- Uxbridge College
- Wirral Metropolitan College

questioned whether this should be one single pathway. They felt it should be split in to two pathways: Building Services Engineering; and Construction & the Built Environment. The argument was that although there were some similarities between the areas, they were in fact very different and should be treated as such and have their own pathways. We ended up by splitting them into two pathways.

Key to the success of the project was to consult and consult again on what was right, what needed to be

added to, or to be taken out and then consult again.

- Agreed Framework Launch

The national launch event was held on 7th March 2013 at the London headquarters of the Institute of Mechanical Engineers, accompanied by an official press release. Paul Jackson CEO of Engineering UK, who spoke at the event, stressed the importance of engineering to the UK GDP and the growing need for a technician level workforce with environmental engineering skills.

The event was a success, with a good cross-section of our key stakeholders and partners in attendance as well as several professional bodies such as the Institute of Mechanical Engineering and Institute of Environment Managers who want to offer professional membership to future Engineering Environmental Technologies Apprentices.

- Piloting and Delivery

A network of eight partner colleges across England, with strong specialisms in engineering, will offer the Higher Apprenticeship initially, with more colleges and training providers expected to join as the qualification is promoted across the sector. Colleges offering the Higher Apprenticeship initially are: City and Islington College; Wirral Metropolitan College; Isle of Wight College; City College Norwich; South Nottingham College; Sheffield College; Uxbridge College; and Carshalton College.

We have set ambitious targets for this project - 120 apprentices for 2013 rising to 720 over the next two years. We have also set ourselves challenging diversity targets

and aim to recruit 12% women, 5% Black, Asian and Ethnic Minority (BAME) and 5% people with disabilities onto the qualification. So far several colleges have committed to engaging 15 apprentices to start the programme in September 2013 including City and Islington College, and we are expecting many more to set recruitment targets in the following weeks.

The outcomes

1. Qualifications

A new cross-sector Level 4 Engineering Environmental Technologies apprenticeship, with three pathways specialising in:

- Construction and the Built Environment
- Building Services Engineering
- Engineering Manufacturing

2. Marketing

An effective marketing strategy to roll out, in order to raise awareness and promote the qualification. This included resources and materials to support other training providers in promoting the qualification and recruiting apprentices.

3. E-resources

Web resources and toolkits - one for providers, one for apprentices and one for employers. We are currently working with e-wise on an e-portfolio to support progress and assessment.

4. Partnerships

Gained valuable experience of partnership working with the diverse mix of employers, SSC, other training providers and with other organisation with specialist expertise such as WISE and Pearsons.

5. Reputation

Consolidated our reputation as a college that continues to seek new areas to develop, particularly skills shortage areas and develop the capacity of staff at the college to work on cross sector projects.

The impact

For employers, the Higher Apprenticeship demonstrates the real benefits of having a qualification in which they have been involved in developing, in partnership with others. They can see that the result in an apprenticeship that is fit for purpose, and which leads to a more qualified, professional and

flexible workforce

Major engineering employers have committed to training the next generation of engineering talent within their existing workforce by supporting the new government-backed Higher Apprenticeship in Engineering Environmental Technologies.

Professor John Allport from Cummins Turbo Technologies, who attended and spoke at the official launch, enthusiastically endorsed the qualification and announced his company's commitment to registering their employees for the qualification.

Additional resources

These websites offer useful information linked to this case study:

Construction skills: the Sector Skills Council for Construction Industry

www.bconstructive.co.uk

Energy & utility skills: The Sector Skills Council for the gas, power, waste management and water industries

www.euskills.co.uk

SEMTA: the Sector Skills Council for Science,

Engineering and
Manufacturing Technologies.
www.semta.org.uk

Summitskills: the sector
skills council for the building
services engineering (BSE)
sector
www.summitskills.org.uk

Pearson: publishing and
education
www.pearson.com

WISE: Promoting female
talent in science, engineering
and technology
www.wise.org.uk

Future Engineering Talent:
Information on the Higher
Apprenticeship - Engineering
Environmental Technologies
www.futureengineeringtalent.co.uk

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LSIS STEM Support

These resources are examples of effective practice in STEM teaching and learning; they have been produced by regional STEM Advisers working with managers and practitioners. The contents should not be compared with commercially produced resources, although in many cases they may have comparable or better learning outcomes.

LSIS STEM Support offered unique support for the learning and skills sector, working with managers and teachers in all settings – colleges, work-based learning, prison units and adult education. To explore the legacy of LSIS STEM Support, visit:

www.nationalstemcentre.org.uk/stem-in-context/support-for-colleges

A consortium of leading organisations involved in STEM education delivered the programme:

