

STEM Traineeships in the Humber LEP Area

Report of demonstration pilot project

March 2015



NIACE is the National Institute of Adult Continuing Education, the national voice for lifelong learning. We are an international development organisation and think-tank, working on issues central to the economic renewal of the UK, particularly in the political economy, education and learning, public policy and regeneration fields.

© NIACE 2015

Published by the National Institute of Adult Continuing Education (England and Wales)
21 De Montfort Street
Leicester LE1 7GE
Company registration no. 2603322
Charity registration no. 1002775

NIACE is the National Institute of Adult Continuing Education, the national voice for lifelong learning. We are an internationally respected development organisation and think-tank, working on issues central to the economic renewal of the UK, particularly in the political economy, education and learning, public policy and regeneration fields.

www.niace.org.uk

Follow NIACE on Twitter:

[@NIACEhq](https://twitter.com/NIACEhq)

[@NIACEDC \(Wales\)](https://twitter.com/NIACEDC)

[@NIACEbooks \(Publications\)](https://twitter.com/NIACEbooks)

[@NIACEhq_events \(Events\)](https://twitter.com/NIACEhq_events)

All rights reserved. No reproduction, copy or transmission of this publication may be made without the written permission of the publishers, save in accordance with the provisions of the Copyright, Designs and Patents Act 1988, or under the terms of any licence permitting limited copying issued by the Copyright Licensing Agency.

CONTENTS

SECTION 1: INTRODUCTION.....	4
1.1 STEM and localism	5
SECTION 2: BACKGROUND.....	6
2.1 Humber Local Enterprise Partnership.....	6
2.2 Methodology	8
SECTION 3: PROJECT FINDINGS.....	12
3.1 Traineeships in general	12
3.2 STEM traineeships	12
3.3 The role of the LEP.....	13
3.4 Which STEM skills should be included?	14
Section 4: OUTCOMES OF THE PROJECT.....	15
SECTION 5: KEY FINDINGS AND RECOMMENDATIONS	17
SECTION 6: CONCLUSION	21
Appendix 1: Humber LEP Employment & Skills Organisation Structure	22
Appendix 2: List of potential STEM traineeship providers	23
References.....	24

SECTION 1: INTRODUCTION

NIACE is the National Institute of Adult Continuing Education, the national voice for lifelong learning. We are a large, internationally respected development organisation and think-tank, working on issues central to the economic renewal of the UK, particularly in the political economy, education and learning, public policy and regeneration fields.

This report presents the findings of a six-month demonstration pilot project undertaken by NIACE in partnership with Humber Local Enterprise Partnership (LEP). Project activity took place within the geographical area covered by the Humber LEP and was designed to support the LEP in its efforts to boost the number of local workers qualified to meet the surge in demand from local industries reliant on Science, Technology, Engineering and Maths (STEM) skills. In many of these industries, demand is focused on workers skilled at level 3 and above, and for many years there has been a shortage of workers qualified at these levels in STEM subjects. Humber LEP is responding to this demand by encouraging the growth of apprenticeships, particularly those meeting the needs of new industries, such as offshore wind, which are seen as key to the region's future.

This project has focused on traineeships as an important pathway in enabling young people to prepare for employment and, in particular, for an apprenticeship in STEM job roles. The aim of the project has been to support the introduction of traineeships specifically focused on the needs of STEM-related employment across the Humber LEP area.

This report is the output of phase two of a wider piece of work that NIACE has been commissioned to undertake on behalf of the Gatsby Charitable Foundation. Phase one activity was a situational appraisal conducted by NIACE in partnership with Dorset LEP, the findings of which were published in 2014 - <http://shop.niace.org.uk/traineeships-stem-leps-discussion-paper.html>

The situational appraisal in Dorset explored whether and how traineeships could work for STEM within the context of a LEP area. It drew on desk research and interviews undertaken within the Dorset LEP area, looking at both the potential and the barriers associated with traineeships within STEM-based roles. The main findings of this research were:

- Lack of knowledge and awareness of traineeships, particularly amongst employers, will limit the effectiveness of the policy.
- Poor quality Information, Advice and Guidance (IAG) around STEM will restrict young peoples' participation in STEM traineeships.
- STEM traineeships should include STEM contextualised maths provision.
- Financial and practical support would encourage and enable STEM employers to offer meaningful and high quality traineeship work placements for young people.
- Traineeships have significant potential to reduce youth unemployment and contribute to social inclusion.

The appraisal concluded that LEPs, as key strategic bodies with responsibility for local growth, have a unique and fundamental role to play in driving traineeships at local level to deliver outcomes that meet the individual and often specialist needs of the local STEM labour market. To build on these findings, NIACE established a partnership

with the Humber LEP, whose existing work on STEM skills, and in particular, apprenticeships, provided the ideal infrastructure to demonstrate how STEM traineeships can be implemented to meet the skills needs of a local economy.

1.1 STEM and localism

STEM skills and job roles are considered critical by government and other key stakeholders to future national growth and employment. The key drivers of this include:

- Advances in STEM education in competitor countries.
- The need to ensure that British industry does not get left behind in new technological developments in areas such as nanotechnology, advanced engineering and robotics.
- Increasing technical knowledge and skills will be required to solve some of society's 21st century problems, such as protection of the environment and increasing longevity.
- The need to increase productivity in all levels of work in Britain to remain competitive in international markets.

In an increasingly competitive global marketplace, there is an immediate and emerging need to develop a skilled and flexible workforce, with expertise in STEM. However, achievement of this aspiration has implications for education and skills policy and implementation at every age.

Alongside concerns about STEM skills, there is a growing consensus at policy level of the need to shift the focus of responsibility for addressing labour market and skills challenges from national level to a more local level. This principle underpinned the establishment of Local Enterprise Partnerships (LEPs) by the Coalition Government in 2011. Throughout England there are 39 LEPs, each of which brings together local stakeholders in the public, private and third sectors to collaborate in articulating and addressing the economic needs of their localities to plan and secure growth and job creation.

LEPs share common objectives on skills – to improve the employment prospects of local people, to secure the growth potential of local businesses and to promote social inclusion in growth strategies. Whilst STEM industries are more prominent in some LEP areas than others, advancements in technology and the growth of STEM across the economy places an imperative on skills provision to address employers' STEM labour market needs.

SECTION 2: BACKGROUND

Traineeships were launched in August 2013; they are a key part of the Government's plans to tackle youth unemployment. A traineeship is an education and training programme designed to give young people the skills and experience they need to secure an apprenticeship or sustainable job as quickly as possible. Traineeships include three core elements – work preparation training, maths and English (for young people who have not achieved the required standard of GCSE grade A*-C) and high quality work experience. Traineeships last a maximum of 6 months though many will be significantly shorter than this, depending on each young person's needs.

Traineeships are for young people:

- aged 16-24 (including those with Learning Difficulty Assessments or Education, Health and Care Plans);
- who live in England, are not currently in a job and have little work experience, but who are focussed on work or the prospect of it;
- who are qualified below level 3 (a full level 3 equates to 2 or more A-levels or equivalent);
- who providers and employers believe have a reasonable chance of being ready for an apprenticeship or other employment within six months of starting a traineeship.

Traineeships are NOT for young people who require intensive support or are considered furthest from the labour market; or are already in work; or already have the skills and experience that would enable them to start an apprenticeship or a job.

The traineeships framework provides considerable flexibility in how it is delivered by providers. Aside from the core content of maths, English, work preparation and work experience, providers have the flexibility to include other elements to meet the specific needs of individual trainees.

2.1 Humber Local Enterprise Partnership

Humber LEP serves an area covering both banks of the Humber and including towns as diverse as Grimsby, Bridlington and Goole. The main economic focus is the Humber, with its range of traditional industries including chemicals, logistics and port activities. In recent years these have been augmented by newer industries with a particular focus on renewable energy.

This project was a collaboration between NIACE and Humber LEP, together with its partners and stakeholders. The aim was to build on NIACE's original research in Dorset and support a process of integrating STEM traineeships into the Skills Strategy of the local Economic Plan.

Humber LEP was well-placed to undertake this project:

- STEM skills are key to both the current local economy and plans for future development¹

¹ The Humber area is considerably above the national average for employment and GVA in a number of STEM-intensive industries including agriculture, food production, fuel refining, chemicals,

- The LEP has brought together a wide range of stakeholders to develop the Employment and Skills Strategy
- Local skills providers have started work on delivering traineeships.

Despite the progressive approach being implemented by Humber LEP, data shows that the area still faces significant challenges in its labour resources. The area lags behind the rest of England minus London in GVA by 9% and by the whole of England by 17.8% (Humber Local Enterprise Partnership, 2014). Closing this gap will require a combination of further capital investment in the region, together with enhancement of the local skills base.

While skill levels in the area do remain lower than the country as a whole, qualification levels have been rising faster in the Humber, than in the rest of the country, throughout the last 10 years. However, further progress is required to meet the skills needs of the STEM-related industries along the Humber. It is evident that there is a growing shortage of skilled labour in STEM-related companies, predominantly in the emerging industries of offshore wind and other renewables, together with the associated engineering industries that support them. Economic recovery has taken off in the Humber and with it the need for skilled labour has also expanded.

The work on STEM traineeships, therefore, is set within the context of an urgent need to upskill the local population in the new technological industries, before those companies seek to fill their labour needs primarily from outside the region. While this strategy may meet the purely commercial needs of some local companies, it would fail to address the wider social needs of the area. Existing local social and economic exclusion would be reinforced and exacerbated by a greater tendency for money earned in the area to be exported and not spent locally.

Although the Humber LEP has made wind energy the focus of its economic strategy, it has identified the following sectors as critical for economic development. The majority of these require significant STEM -related skills among their workforces:

- Chemicals.
- Energy including renewable.
- Ports and logistics.
- Agribusiness including food processing.
- Tourism.
- Digital services including both digital infrastructure and digital services, such as creative media.
- Manu-services including enhanced service propositions by manufacturers and outsourced services in logistics (University of Hull, 2013)

Skills development has been operationalised by Humber LEP through the establishment of a network of groups, including executive groups, task and finish groups and a range of forums (see Appendix 1). In addition, several key policy initiatives have been set up. The first of these was a 'Skills Pledge' through which employers were encouraged to

pharmaceuticals, shipping and port activities, metallic and non-metallic products. (University of Hull, 2013)

commit to one or more of a range of activities designed to improve skill levels and increase opportunities within the workplace².

In addition, local data showed that inadequate levels and sources of information, advice and guidance (IAG) were impeding entrance to apprenticeships and other forms of vocational training. To address this Humber LEP established a 'Gold Standard' of IAG as a framework of professional practice to which providers are encouraged to commit.

Each of these initiatives illustrates how the LEP has been establishing itself both as a strategic leader and an honest broker that can make positive interventions in the economic landscape without disturbing existing market and professional relationships.

2.2 Methodology

Aims and objectives

In 2014 NIACE was commissioned by the Gatsby Charitable Foundation to undertake a situational appraisal, in Dorset, to explore the potential of STEM traineeships in the context of a LEP area. Developing from the findings of the Dorset research, the aim of this phase of the work, as agreed by NIACE and Gatsby, was to move from conceptual analysis to implementation – to demonstrate how a LEP can play a strategic role in implementing STEM traineeships in a particular area.

During initial discussions between NIACE and Humber LEP it was agreed that, within the six month delivery period, the aims of the project should focus on:

- Developing a traineeship model based around STEM subjects.
- Engaging providers in delivering STEM traineeships.

This would support the LEP's longer-term strategic objectives of:

- Creating a supply of 'apprenticeship-ready' young adults for the growing needs of the Humber economy.
- Giving STEM SMEs access to the same levels of technical skills enjoyed by larger companies.

In this context, the specific objectives of the project were to:

- Engage a wide range of local stakeholders in the project and raise their awareness of STEM traineeships.
- Collate baseline information about current levels of planning/delivery of traineeships, from all local providers.
- Source information from local STEM employers about their skills needs and how these needs could be met through the development and design of STEM traineeship frameworks.
- Support the planning and development of suitable STEM focussed traineeships within an overall framework agreed with the LEP.

² <http://www.humberlep.org/skillspledge> (accessed 03-03-15)

Desired long term outcomes and impact

Through achieving the aims and objectives set for the six month delivery phase, it was anticipated that the longer term outcomes and impact of this project would include:

Young People

- Young people in the traineeship target group³ with an interest in working in STEM industries and job roles will be able to learn skills specific to those workplaces and gain work experience that will enable them to accelerate their progression into jobs or apprenticeships.

Employers

- Employers will benefit from access to a larger pool of young people, with STEM knowledge, available for recruitment as employees or apprentices.
- By providing work experience opportunities, STEM employers with little recent experience of recruiting staff will be able to test the market on an individual basis and evaluate whether a young person will be suitable for an apprenticeship or job within their business.

Providers

- Providers will be able to develop their STEM offer to the employers they currently support and develop relationships with new employers.
- STEM traineeships will provide a framework for providers to engage a group of young people for whom they might otherwise find it difficult to provide suitable training.

LEP

- The LEP will be seen as the strategic lead in creating a new step in the STEM careers ladder, emphasising the importance of its role in leading and managing the economic strategy of the Humber.

Roles

NIACE and Humber LEP established a six-month partnership to implement this project. As the partner with long term strategic responsibility for economic growth in the region, it was agreed that the LEP would lead the activity, thus enabling it to develop a sustainable approach to STEM traineeships that could be embedded and developed beyond the duration of the project.

NIACE's role was that of strategic and supportive partner to Humber LEP. As the leading national development agency in the learning and skills sector, NIACE was well placed to undertake this role. It was able to apply its extensive knowledge of national traineeship policy and implementation, to the needs of Humber's local STEM economy. NIACE's skills in bringing stakeholders together, fostering collaboration and supporting the LEP to translate national policy into a targeted and meaningful local offer was fundamental to the project.

³ Young people who are keen to work but who lack required levels of English and maths and who have little or no work experience.

Approach

Initial engagement with providers

The first phase of project activity involved direct engagement with local learning and skills providers to:

- Identify existing levels of activity in the delivery of traineeships.
- Promote the concept of applying traineeship flexibilities to include specific training in STEM skills.

Learning and skills providers were considered to be the key starting point for this project as:

- Providers are effectively the 'owners' of traineeship models as they are the contract holders and they are funded to deliver the programme.
- Most providers have long-established relationships with local employers.
- NIACE's earlier research in Dorset had identified very low levels of knowledge about traineeships amongst employers. It was agreed that, through existing relationships and networks, providers would be well placed to promote the concept of STEM traineeships to employers, rather than employers stimulating provision.

A list of local eligible traineeship providers was obtained from the national SFA/EFA database⁴; this was refined through the LEP's local knowledge which enabled a closer focus on those providers who were likely to be interested in STEM subjects. Information about the project, its aims and objectives, was sent to these providers, along with an invitation to meet with the project team and engage in the project. A number of responses were received and individual meetings were arranged with ten local providers.

Meetings with providers

Meetings were held between the project team and ten providers. The purpose of the meetings was to identify existing traineeship provision; to gather intelligence about potential barriers and challenges to STEM traineeships in the Humber; to promote the concept of STEM traineeships; and to provide sufficient information to enable providers to begin engaging with employers to establish STEM traineeships. Overall, providers showed high levels of awareness of the skills challenges facing the area. They recognised the urgent need to provide more highly skilled recruits, with STEM skills, to meet the growing demand from employers.

Through discussions with providers it was agreed that engaging local employers in STEM traineeships would be a two-way process. Firstly, providers would need to effectively promote STEM traineeships and persuade employers of the value of the programme and, secondly, once persuaded, they would need employers to tell them what specific STEM-related skills they would wish to see included in STEM traineeship programmes.

Engagement with local Skills Forums and Employer Forums

The NIACE Project Manager presented information about the project to groups of providers and employers at meetings of the Skills Forum and Employer Forums

⁴ <https://www.gov.uk/government/publications/traineeships-eligible-providers> (accessed 03-03-15)

organised by the LEP. The purpose of these presentations was to introduce the notion of STEM traineeships; enable providers and employers to discuss the concept, ask questions and feedback their views. Through engaging Forum members in discussions about STEM traineeships, Humber LEP was able to secure understanding of STEM traineeships and commitment to the concept, prior to implementation.

This approach proved highly effective in enabling the project team to develop a good understanding of:

- Current levels of activity in the planning and delivery of STEM traineeships in the Humber.
- Stakeholders' opinions about the potential role of STEM traineeships in addressing local STEM skills gaps.

The information that was collected was reviewed in the context of the Humber's economic and skills strategies and subsequently informed the LEP's planning about the range of ways in which STEM traineeships could be integrated into the local skills and employment infrastructure.

SECTION 3: PROJECT FINDINGS

3.1 Traineeships in general

In the Humber LEP area learning and skills providers are involved in traineeship provision in a wide range of ways. Almost all of the providers interviewed were enthusiastic about traineeships, but they reported varying levels of engagement.

Some larger organisations, mainly further education colleges or local authority training providers, are delivering (or beginning to deliver) traineeships but are somewhat uncertain about where they should integrate the programme within their existing organisational structures, for example, within foundation skills or with employability, which might also include apprenticeships.

A number of providers commented on the value of traineeships to smaller employers, allowing them to 'test the water' with a potential apprentice or employee before making what for many small employers is a major commitment, particularly if they have not taken on any new staff for some time.

There was a consensus that it can be challenging to engage some employers in discussions about traineeships, as many are still familiarising themselves with apprenticeships. Adding traineeships to the range of options available to employers is perceived by some providers as a step too far at this point in time. In addition, lack of promotion and market visibility of traineeships is perceived as an added difficulty in explaining the programme to employers.

One issue identified by a number of providers was that the name of the scheme, 'traineeships', was not the most appropriate for this level of learning/type of programme. They cited the fact that the words 'trainee' and 'traineeship' are in common usage outside of the Government-funded programme. Some cited examples they had seen of 'less scrupulous' organisations, who are not eligible to deliver traineeships still using the terminology to promote their own services to employers. They contrasted this potential confusion with the very specific meaning and usage of the term 'apprentice' and some suggested 'pre-apprenticeship' as a more suitable alternative to 'traineeship'.

3.2 STEM traineeships

Overall, providers were enthusiastic about the concept of STEM traineeships. For most it came as a new idea, while for others it was something they had already considered. One provider – HETA – delivers established learning programmes focused on 'industrial training'. For HETA, traineeships are a logical extension of the work they were already doing around apprenticeships and they were indeed already delivering engineering traineeships prior to this project.

HETA (Humber Engineering Training Association)

Each year HETA recruits 200 engineering apprentices, for which there are generally around 800 applicants. Last year, in addition to their apprentices, they also took on 25 trainees on the grounds that they had not quite reached the standard for an apprenticeship at that point in time. These trainees received support for their English and maths together with employability skills and work experience. However, they also worked on the shop floor alongside the other apprentices, learning essential engineering skills. Of the 25 who started traineeships, 23 progressed into apprenticeships.

Another provider had also already identified the potential to specialise its traineeships in three occupational areas: engineering, health and customer service/business administration. At the time of the initial meeting with the NIACE/Humber LEP project team, this provider was preparing to launch its first traineeship programme focusing delivery on these three occupational areas.

In addition, staff at a local agricultural college spoke of the increasing technological basis of farming and other rural industries, and were beginning to include classroom-based science and technology into their traineeship programme.

For these providers, who had established relationships in place with a focused group of employers reliant on STEM skills, extending their STEM activities into traineeships was a natural progression. However, for the majority of providers the notion of a STEM traineeship was a new concept. There was a strong consensus that focussing the programme in this way would enable them to enhance their offer to local employers and add value to a range of other programmes and initiatives that they were involved in delivering.

3.3 The role of the LEP

One of the key findings of NIACE's research in Dorset in 2014, was that LEPs have a unique and fundamental role to play in driving traineeships at local level to deliver outcomes that meet the individual and often specialist needs of their local STEM labour markets.

Providers in the Humber expressed universal understanding and acceptance of the role of the LEP in taking the lead on local skills strategy, including the development of STEM traineeships. This was predicated on:

- The LEP being a partnership comprised of all relevant stakeholders and covering all sectors of the economy. As a result it is able to act with impartiality for the benefit of the local economy as a whole and also to lead on strategy.
- Impartiality across market competition in the independent training sector as well as public learning and skills providers.
- The LEP developing its strategic planning from a rigorous evidence base derived from all sectors, across the Humber area, as well as from impartial organisations outside of the area.

Whilst these specific conditions may not be replicated across all 39 LEPs in England, the fundamental driver for the establishment of LEPs – to stimulate local economic growth

and the creation of local jobs – will result in all LEPs being well positioned to take on a strategic role in influencing local skills provision.

3.4 Which STEM skills should be included?

Given the wide range of subjects and skills that fit within STEM and the large portfolio of STEM employment sectors within the Humber area, it is perhaps not surprising that this was a question that created challenges for some providers.

For providers with a comparatively narrow sector focus, the issue was less challenging. For example, the agricultural college referred to previously in this report was very clear about the maths and physics that would be useful in a STEM traineeship, along with an introduction to skills such as working with GPS and laser technologies.

Providers with a more diverse portfolio of employer-clients clearly identified different challenges in incorporating what could be a very diverse range of skills in response to the needs of their employers. One area of skill and knowledge that had already been incorporated by a number of providers was that of health and safety. Within the diversity of STEM occupations in the Humber there is quite a range of different, very sector-specific health and safety requirements, for example, between gas production and engineering manufacture. Providers said that employers placed high value on prospective apprentices who came ready-equipped with the relevant health and safety 'ticket'. This would be challenging within a generic STEM traineeship, but possible within a STEM traineeship focussed on a particular job role/STEM area.

Discussions with employers at a number of Employer Forums reinforced the importance of the very specific STEM skills that might be required in different businesses. It also highlighted the importance of providers consulting employers about the key STEM skills that they are looking for, and what level of skill it is appropriate for trainees to acquire before progressing to an apprenticeship.

In a large chemical-processing factory visited by the project team, the employer spoke of the importance of new employees having the ability to create, manage, and interpret spreadsheets. This was considered almost as important as good English and maths skills. For this business, spreadsheets are seen as an essential part of the language that all employees use to communicate with each other.

The director of a small manufacturing company that produces medium-sized, sea-going vessels from plastic, said that basic knowledge of carpentry is an essential skill in his business. For this employer, an apprentice who came with some experience of working with wood was highly useful.

Neither of the STEM skills identified in these two examples would necessarily have been obvious choices to anyone outside these businesses, which reinforces the importance of providers consulting with employers in advance of designing STEM traineeship programmes.

SECTION 4: OUTCOMES OF THE PROJECT

Humber LEP's economic and skills strategies clearly highlight that the economic success of the area is dependent on employers being able to access sufficient numbers of employees with a range of STEM skills, at varying levels. Through this project the LEP has been effective in adding another step to the 'skills escalator' approach that is being developed – it has provided a specific focus on STEM traineeships as an entry point through which young people can develop initial STEM skills, as a basis for progression to programmes that will enable them to develop higher level STEM skills and enter STEM apprenticeships and job roles.

The LEP has made a commitment to continue to support the development of STEM traineeships and has embedded this approach within the local skills and employment infrastructure. This is being achieved through a range of plans, including:

- The 'Skills Pledge' – Humber LEP has secured the commitment of over 200 businesses to take specific action to improve local skills and opportunities. STEM traineeships have now been visibly incorporated into the Skills Pledge framework as a commitment that employers can make - <http://www.humberlep.org/skillspledge>
- The Information, Advice and Guidance 'Gold standard' - over 40 schools, further education colleges and independent training providers have signed up to the LEP's IAG 'Gold Standard'. In establishing this initiative, the LEP has set a very public marker for education and training organisations to address an area of weakness that has been recognised both locally and nationally. Traineeships that equip young people with STEM skills are increasingly forming part of the local offer for young people and will be incorporated into information, advice and guidance through the Gold Standard initiative - <http://www.humberlep.org/skills/gold-standard>
- Mapping and publicity about local career and training opportunities including, for example, routes to employment within the renewables sector. This will include information about STEM traineeships, as a pathway to job roles which require STEM skills and where there are current and future job vacancies for young people.
- The recently launched Humber Apprenticeship Support Service is a brokerage service for employers, training providers and candidates. It helps people access information about apprenticeships and offers impartial support and guidance. The role of the Service has now been expanded to offer advice about traineeships as well as apprenticeships. In particular links are being made between STEM traineeships and apprenticeships in STEM job roles, to support progression and contribute to increasing the supply of 'apprenticeship-ready' young people with basic knowledge of STEM - <http://www.humberlep.org/skills/hass>
- The 'Springboard' project, which works with young people at a greater distance from the labour market than the target group for traineeships. The LEP has reported some success in enabling Springboard clients to progress onto apprenticeships. However the pathway is now being strengthened as traineeships provide an additional stage in the process, which, when focussed on STEM enables young people to develop specific skills required by local business, to fill job vacancies - <http://www.humberlep.org/skills/springboard>

At the February meeting of its Employment and Skills Board, Humber LEP agreed to continue the strategy of working directly through providers to develop and embed STEM traineeships into the local learning and skills offer. Earlier this year the Skills Funding Agency highlighted the need for local skills delivery to align with local skills strategies as articulated by LEPs and as set out in Local Growth Deals. In the Humber, this will mean that a triangular relationship will be fully established between the Skills Funding Agency, the LEP and training providers. Most of these relationships are already in place, and there is a clear focus on STEM traineeships, as a result of this project, which will ensure that the STEM needs of the local economy continue to be integrated into the overall skills strategy planning and delivery.

SECTION 5: KEY FINDINGS AND RECOMMENDATIONS

The findings of this project have led to a number of clear recommendations for both national and local government. Many of the recommendations are specifically focussed around STEM traineeships; others are focussed around generic traineeship policy and implementation, but have implications for STEM traineeships.

LEPs should be given responsibility for local STEM strategies

STEM traineeships will only be successful in the context of a clear local economic assessment and strategic plan in which all stakeholders can see how their roles contribute to the overall success of the strategy.

The flexibility inherent in traineeship policy enables learning and skills providers to develop programmes to meet the needs of young people. However, it's essential that in doing so, providers have a detailed understanding of the STEM skills needs of the local economy and are therefore able to develop traineeship programmes that provide the skills that employers value and that will provide an entry point to STEM jobs.

Local Enterprise Partnerships have a unique role to play in leading the STEM skills agenda at local level. The work undertaken by Humber LEP has highlighted that LEPs are well placed to listen to STEM employers about current and future skills requirements; they can correlate this local intelligence with labour market information; and they can work with a range of local stakeholders to embed a targeted STEM focus into wider initiatives or stimulate the development of STEM programmes.

Government should pilot STEM traineeships and align some content with apprenticeships

A traineeship is an education and training programme designed to give young people the skills and experience they need to secure an apprenticeship or sustainable job as quickly as possible. Unlike apprenticeships, traineeships are not required to provide young people with job-specific skills. As highlighted previously in this report, it is well documented that the UK faces a growing shortage of skilled staff to meet the STEM employment needs of the economy. Traineeships provide an important entry route to employment and apprenticeships for young people, however, at present, the programme is not currently addressing national or local skills gaps, as it is not being targeted at specific sectors or job roles where there is a shortage of skilled labour. It is therefore recommended that government should pilot a targeted STEM traineeship programme. This should include the alignment of some STEM traineeship content with relevant apprenticeship frameworks

Under current guidance the content of a traineeship programme (other than the essential elements of maths and English, work experience and work preparation training) can be set by the provider, in agreement with an employer and the young person. However, employers offering apprenticeships will be working under one of the available apprenticeship frameworks. These frameworks are developed by industry partnerships and incorporate the skills and knowledge deemed appropriate within that particular industry. While it may be useful to an individual employer to be able to request some particular industry-specific content within a traineeship, some broader alignment of STEM traineeship content with apprenticeship frameworks would benefit

industries as a whole and would facilitate more linear progression from traineeships to apprenticeships.

Recent evaluation of the Apprenticeship Trailblazers, undertaken by The Institute for Employment Studies on behalf of the Department for Business, Innovation and Skills, has shown that, overall, the Trailblazer process has been effective in stimulating employer engagement and has resulted in new sets of standards and assessment models that meet employers' needs. Trailblazers could also be charged with generating content for pilot STEM traineeships.

Building Services Engineering

Summit Skills is the Standard Setting Organisation for Building Services Engineering. It offers Intermediate Level apprenticeships in a number of the component skills of building services engineering, for example, plumbing and refrigeration and air conditioning. On the subject of entry conditions the framework states:

'Although there are generally no nationally laid-down minimum entry or previous experience requirements to undertake the Intermediate and Advanced Level apprenticeships in the Domestic Plumbing and Heating Industry, the following selection criteria may be used as guidance. The programmes are likely to be suitable for individuals who:

- *Have an aptitude for technical subjects and/or are practically minded*
- *Have an interest in technology*
- *Can demonstrate an ability to solve practical problems*
- *Have a portfolio of evidence from work experience, non-accredited courses, volunteering, have previously worked or are working in the sector'* (Summit Skills, 2013)

A number of awarding bodies (e.g. ABC, Ascentis, City & Guilds) offer Awards, Certificates and Diplomas at Levels 1 and 2 in Building Services Engineering, which could be used to establish more formal linkages between traineeships and apprenticeships. Study of these courses could help to provide a broader grounding in the range of building services within which the trainee might then go on to take an apprenticeship in plumbing or any other of those services.

Local STEM strategy funding should be made available to LEPs

This project has highlighted the critical importance of the role of a strong, proactive LEP with a clear vision in driving forward a strategic approach to local STEM skills. Despite the geographic and economic differences across the country, it is now widely accepted that STEM skills are crucial to economic growth.

In the Humber, the LEP makes use of a range of funding to develop its work around implementing its skills strategy. None of this funding is specifically focussed upon STEM skills. Government should consider creating a specific STEM funding stream, for example through a 'STEM Challenge Fund' for LEPs to bid to, to specifically implement STEM skills strategies that are critically important to local growth. Consideration should also be given to aligning priorities for European Structural Investment Funding with local STEM priorities. In the Humber, one of the drivers for STEM traineeships is to enable local unemployed young people to enter STEM job roles and establish a sustainable career in

growth industries. This driver has strong links with the social inclusion agenda that European funding, such as ESIF, is designed to promote.

Greater promotion of traineeships to increase public understanding and visibility

Throughout this project providers commonly stated that the traineeship programme lacks visibility and that this makes their work harder in promoting it to employers and young people. Government has said that traineeships are part of 'the apprenticeship family' but there has been very little promotional support for this vision. The effectiveness of public campaigns to boost apprenticeships has shown how important this is and providers consistently suggest that a similar approach is required to increase the visibility of traineeships.

However, national promotion needs to be supported by local support and promotion. This helps employers to connect with the programme, provides local authenticity and puts opportunities into a local context for young people seeking employment.

One of the key strengths of the traineeship programme has been the way in which a clear policy framework has been accompanied by flexibility in terms delivery and content. However, this flexibility has also created some uncertainty about what exactly traineeships are. A range of 'case studies' would help employers and the public to contextualise the programme into their own experience.

Government should integrate promotional activity for traineeships into the established and effective national campaign for apprenticeships, emphasising the links between the two programmes and backed up with 'case study' examples from a range of employers and trainees, to include a focus on STEM as a key area for future employment opportunities.

LEPs should have a duty to proactively engage with the further education sector

Previous research concluded that successful engagement between LEPs and the further education sector is not uniform across the UK. The 157 group has reported:

"Colleges have often found it difficult to engage with LEPs, and their involvement is patchy. LEPs do not always seem to be clear about their mission, and many are ignorant of the critical role that FE Colleges play already in responding to employers' skills needs and in educating over two thirds of the population. This has led to patchy engagement, and many Colleges following their own initiatives. In at least one case, the College itself has formed a local strategic planning board in order to begin such planning conversation." (157 Group, 2013)

This project has shown that Humber LEP has a strong relationship across the local further education sector, which is based on dialogue and shared responsibility. The Chief Executive Officer of Hull College sits on the main board of the LEP and also chairs the Skills Network. In addition, skills providers from across the sector have been extremely willing to engage with the LEP around STEM traineeships and to accept its strategic role in articulating the skills needs of the area and managing strategic level relationships between providers and employers.

Further education providers are central to LEPs' responsibilities around local economic growth and upskilling. NIACE recommends that:

- In order for FE Capital budgets to be released to a Local Enterprise Partnership, the LEP must demonstrate, to the satisfaction of the Skills Funding Agency, that due regard to the views of local further education providers is adequately represented in Board and Governance structures.
- In areas where the LEP chooses not to have the further education sector represented within its structures, the FE Capital Budget for that area should remain with the Skills Funding Agency.
- LEPs with adequate and effective further education representation at Board level and a track record of effective working relationships with the sector will be first to be considered for further devolution of skills planning and funding powers.
- The Department for Communities and Local Government and the Department for Work and Pensions, as Managing Authorities for European Structural Investment Funding, should make clear that effective partnerships with local further education sectors is advantageous in providing LEPs with influence and control over this funding.

LEPs should play a key role in STEM information, advice and guidance

Information, advice and guidance about STEM-related careers is set in the context of a wider debate that is currently being held around the quality of IAG in general. However, the evidence from this project shows that LEPs can use their status as impartial partnerships to take the lead in setting standards that meet local needs. Establishing a programme such as Humber's IAG 'Gold Standard' and locating STEM traineeships within the initiative is a development which, arguably, only the LEP could undertake. It is very unlikely that engagement with this initiative would have been so enthusiastic had the standard been devised and implemented by any of the partners or sector groups.

Humber LEP has shown local stakeholders that it is impartial and clearly focused upon the economic success of the whole area. This has enabled it to exert considerable influence over both providers and employers through introducing initiatives such as the Gold Standard and the Skills Pledge, which are a key part of the local infrastructure and through which support for new initiatives, such as STEM traineeships, can be located.

GOV.UK and 'Find a traineeship' should include sector/occupational search functions

At the time of writing the GOV.UK website for helping prospective trainees to find a traineeship opportunity is still at beta-testing stage. A number of improvements are required if the site is to be functional and supportive for young people seeking traineeship opportunities. These include features of the search functions, screen layout and the quality of content from training providers. In addition, the website does not currently enable users to search for traineeships in specific occupational sectors such as those which focus on STEM subjects. The functionality of the site should include options for young people who are interested in STEM (and other sectors) to specifically search for such opportunities.

SECTION 6: CONCLUSION

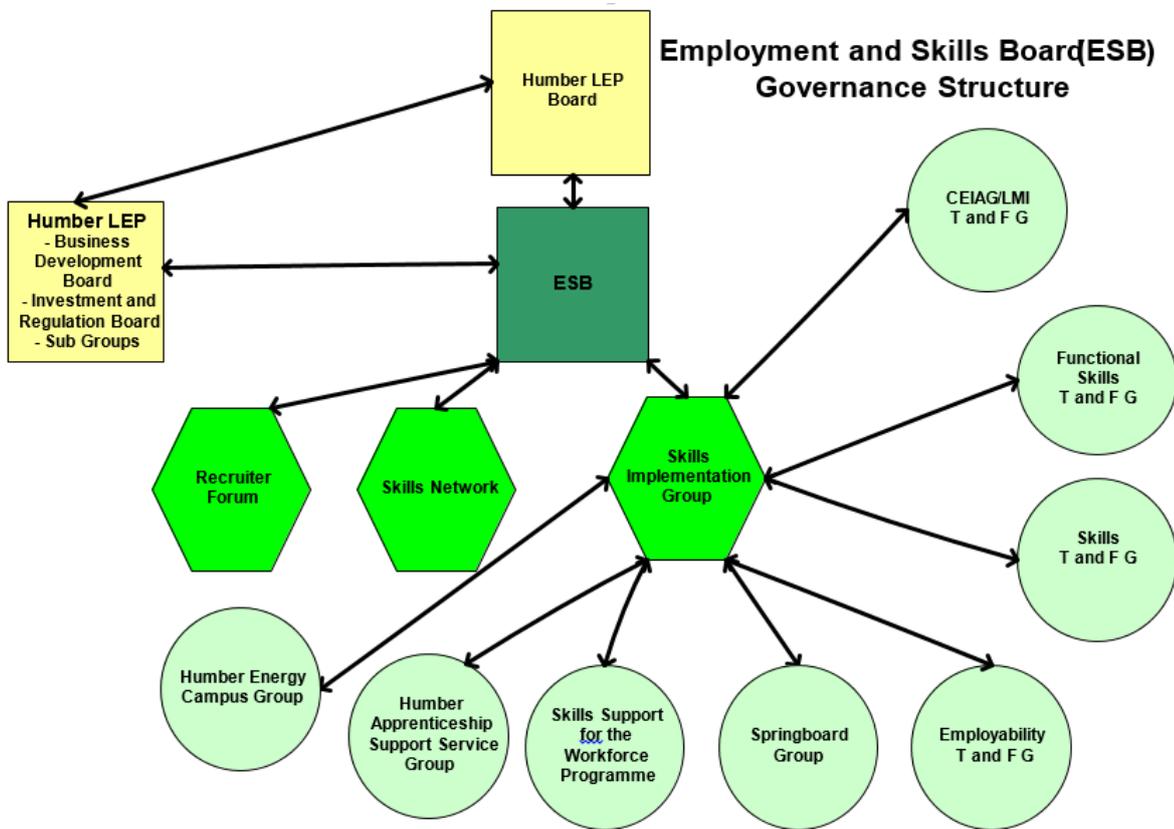
Traineeships are an increasingly important feature of the national skills system. Since the launch of the programme eighteen months ago, the government has shown considerable flexibility and responsiveness in maximising its reach and impact. As a result thousands of young people have progressed into apprenticeships or employment. Whilst this is positive for individual young people and for the overarching labour market, it is perhaps a missed opportunity that the programme is not designed to provide a focussed pathway to current and projected skills gaps. Labour market intelligence consistently shows that skill shortages in STEM job roles is restricting both national and local economic growth. NIACE's work for the Gatsby Charitable Foundation, both in Dorset and in the Humber, has clearly shown that the traineeship programme has the potential to provide a supply of young people who both now and in the future, can fill skills gaps in STEM job roles.

Through working in partnership with NIACE to implement STEM traineeships, Humber LEP has provided an innovative example of how a local strategic body can fully understand the economic requirements of its area; develop a comprehensive strategy; translate strategy into a tangible plan; and work creatively to apply the flexibilities of a national programme to its unique local economy. The LEP is fully committed to a future for the Humber built on industries that are reliant on STEM skills. By embedding STEM traineeships into their planning and the local offer, Humber LEP and its partners are not only demonstrating a commitment to supporting all of their young people to be able to access these jobs, but creating an infrastructure and focus on entry routes to STEM, that will be sustained even if the national policy landscape changes.

Whilst Humber LEP has been effective in securing local support for STEM traineeships and embedding the approach into the local infrastructure, there is also much that could be done at national policy level to enable greater numbers of young people to embark on STEM careers. Piloting a targeted STEM traineeship programme, with industry-specific technical content would increase the supply of young people with STEM knowledge for apprenticeships and other job roles. In addition, targeted funding for LEPs to develop local STEM strategies and the utilisation of European funding streams, alongside promotional activity highlighting the benefits of STEM traineeships would also stimulate the entry of young people STEM careers.

In conclusion, this project has shown that LEPs can secure positive impact in embedding STEM traineeships at local level, in response to the specific needs of local employers and the local economy. However, whilst the inherent driver of the localism agenda is the freedom and flexibilities afforded to LEPs to develop targeted local approaches that are responsive to local need, the challenge is that not all LEPs will be as effective as the Humber in utilising local labour market intelligence, engaging stakeholders and implementing coherent and long term strategies to drive change. It is this set of challenges that reinforces the importance of national policy in providing a framework of provision to address known national skills shortages in STEM subjects. A targeted national focus on STEM traineeships, driven and implemented at local level by LEPs, would provide rich conditions for young people to embark on sustainable careers in STEM, which are fundamental to national and local economic growth.

APPENDIX 1: HUMBER LEP EMPLOYMENT & SKILLS ORGANISATION STRUCTURE



APPENDIX 2: LIST OF POTENTIAL STEM TRAINEESHIP PROVIDERS



Note: Eligible Traineeship organisations updated on
All 19 to 24 are contracted through the Skills Funding Agency

UKPRN	UPIN	Organisation Name	Upper Tier Local Authority	16 to 18 Eligible	19 to 24 Eligible	Intention to deliver for 2014/2015 academic year	
						16 to 18	19 to 24
10022513	118472	AVANT PARTNERSHIP LIMITED	East Riding of Yorkshire	Skills Funding Agency	Skills Funding Agency	Yes	Yes
10000721	105582	BISHOP BURTON COLLEGE	East Riding of Yorkshire	Education Funding Agency	Skills Funding Agency	Yes	Yes
10002126	112380	EAST RIDING COLLEGE	East Riding of Yorkshire	Education Funding Agency	Skills Funding Agency	Yes	Yes
10002570	108335	FRANKLIN SIXTH FORM COLLEGE	North East Lincolnshire	Education Funding Agency	Skills Funding Agency	Yes	Yes
10007938	107632	GRIMSBY INSTITUTE OF FURTHER AND HIGHER EDUCATION	North East Lincolnshire	Education Funding Agency	Skills Funding Agency	Yes	Yes
10003197	106687	HULL BUSINESS TRAINING CENTRE LIMITED	Kingston upon Hull	Skills Funding Agency	Skills Funding Agency	yes	Yes
10003200	106689	HULL COLLEGE	Kingston upon Hull	Education Funding Agency	Skills Funding Agency	Yes	Yes
10003206	106693	HUMBERSIDE ENGINEERING TRAINING ASSOCIATION LIM	Kingston upon Hull	Skills Funding Agency	Skills Funding Agency	yes	Yes
10003219	106695	HYA TRAINING LIMITED	Kingston upon Hull	Education Funding Agency	Contract not held for this age range	No	No
10003491	108415	JOHN LEGGOTT SIXTH FORM COLLEGE	North Lincolnshire	Education Funding Agency	Skills Funding Agency	Intention not yet declared	Intention not yet declared
10003198	108072	KINGSTON UPON HULL CITY COUNCIL	Kingston upon Hull	Education Funding Agency	Skills Funding Agency	Yes	Yes
10004257	106702	MCARTHUR DEAN TRAINING LIMITED	Kingston upon Hull	Skills Funding Agency	Skills Funding Agency	Yes	Yes
10004684	108070	NORTH EAST LINCOLNSHIRE COUNCIL	North East Lincolnshire	Education Funding Agency	Skills Funding Agency	Yes	Yes
10004694	108071	NORTH LINCOLNSHIRE COUNCIL	North Lincolnshire	Education Funding Agency	Skills Funding Agency	Intention not yet declared	Yes
10004695	106706	NORTH LINDSEY COLLEGE	North Lincolnshire	Education Funding Agency	Skills Funding Agency	Intention not yet declared	Intention not yet declared
10020313	118513	TIR TRAINING SERVICES LTD	East Riding of Yorkshire	Skills Funding Agency	Skills Funding Agency	Yes	Yes
10007503	108321	WILBERFORCE COLLEGE	Kingston upon Hull	Agency	Skills Funding Agency	No	No
10007673	108373	WYKE SIXTH FORM COLLEGE	Kingston upon Hull	Education Funding Agency	Skills Funding Agency	No	No

REFERENCES

157 Group. (2012). *The challenges of STEM provision for further education colleges*. 157 Group. Retrieved March 7, 2015, from http://www.157group.co.uk/sites/default/files/documents/the_challenges_of_stem_for_fe_colleges_partnership.pdf

157 Group. (2013). *Consultation response by 157 Group: Local growth and the Skills system January 2013*. Public. Retrieved March 7, 2015

Grant, D. B. (2013). *The Humber's Future Economic and Sustainable Development*. Hull: University of Hull. Retrieved March 1, 2015, from http://www2.hull.ac.uk/pdf/HumberFutureEcoSustainDevReport_April2013.pdf

Humber Local Enterprise Partnership. (2014). *Humber Strategic Economic Plan 2014-2020*. Hull: Humber Local Enterprise Partnership. Retrieved July 8, 2014, from <http://www.humberlep.org/strategies/strategic-economic-plan>

NIACE. (2014). *Can and how might Traineeships work for Science, Technology, Engineering and Mathematics (STEM) within the context of a Local Enterprise Partnership (LEP) area?* Leicester: NIACE. Retrieved from <http://shop.niace.org.uk/traineeships-stem-leps-discussion-paper.html>

Skills Funding Agency. (2015). *Local Enterprise Partnerships (LEPs): increasing their influence on skills budgets*. Skills Funding Agency. Retrieved March 10, 2015, from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/404300/Local_Enterprise_Partnerships_LEPs_increasing_their_influence_on_skills_budgets.pdf

Summit Skills. (2013). *Apprenticeship Framework: Plumbing and Heating (England)*. Summit Skills. Retrieved March 7, 2015, from <http://afo.sscalliance.org/frameworkslibrary/index.cfm?id=FR01775>

University of Hull. (2013). *The capability of the Humber region*. Hull: University of Hull. Retrieved March 1, 2015, from <http://www.humberlep.org/assets/uploads/user/strategies/Capability%20of%20the%20Humber%20region%20-%20excluding%20Appendices%20-%20November%202013%20for%20web.pdf>