The Inspire Education Programme

2014-2019 Independent Evaluation Report

Written by

Skyblue Research for EDF Energy and the Education Inspire Operations Group

November 2019

Front cover shows young people from St Peter's First School (Williton), Stogursey Church of England Primary School and Cannington Church of England Primary who won a competition to name three tunnel boring machines.

https://www.edfenergy.com/energy/nuclear-new-build-projects/hinkley-point-c/news-views/tunnel-boring-machine-naming-ceremony.

Contents

Acknowledgements:

Paul Rhodes and the Skyblue team would like to warmly thank Thomas Thayer and Andrew Cockcroft of EDF Energy, to the Education Inspire Operations Group (and particularly to Joanna Whitehead of Somerset County Council), and most of all to the Apprentices, schools, teachers, headteachers and the pupils from Somerset who have taken part in this independent evaluation between 2014-2019. It has been a privilege to spend time with you.

1 Introduction

Skyblue Research was commissioned in July 2014 to carry out a five-year longitudinal evaluation of the Inspire Education Programme ('the Inspire Programme') run by EDF Energy in Somerset and linked to the construction of Hinkley Point C (HPC).

This independent evaluation report provides a final assessment of progress for the period July 2014 – June 2019. It draws on over 6,000 sources of primary evidence and a further 6,200 sources of data gathered by STEMworks, the Inspire Programme's key collaborator. [1]

EDF Energy's Hinkley Point C (HPC) Inspire Education Programme ('Inspire') prepares young Somerset people for the opportunities that will arrive with the construction and operation of a new nuclear power station at HPC in Somerset, the supply chain and the wider Science Technology, Engineering and Maths (STEM) sector. The HPC Project will require create approximately 25,000 skilled roles across a wide range of roles and sectors to support its construction and estimated 60 years operation.[2]

The Inspire programme began in the Autumn Term of 2011 and aims to inspire young people to continue to study both STEM and associated subjects. By raising awareness and aspirations, Inspire is contributing to a sustainable legacy through a pipeline from education to skills and into future long-term employment.

> "*Creating engagement around STEM subjects, encouraging participation, developing a better understanding of which of those subjects can be used with the industry, connecting those subjects to careers and widening the pool of talent from which the [Nuclear New Build] project can draw in terms of employment*"[3]

The programme aims to work in collaboration with education and key partners to help close this gap and create a framework that will support skills development and pathways into work. The Inspire Programme[4] is led by EDF Energy with support from a range of key local partners.

[1] Event evaluation forms for 3,772 Year 8 and 2,465 Year 9 pupils (2016-2019).

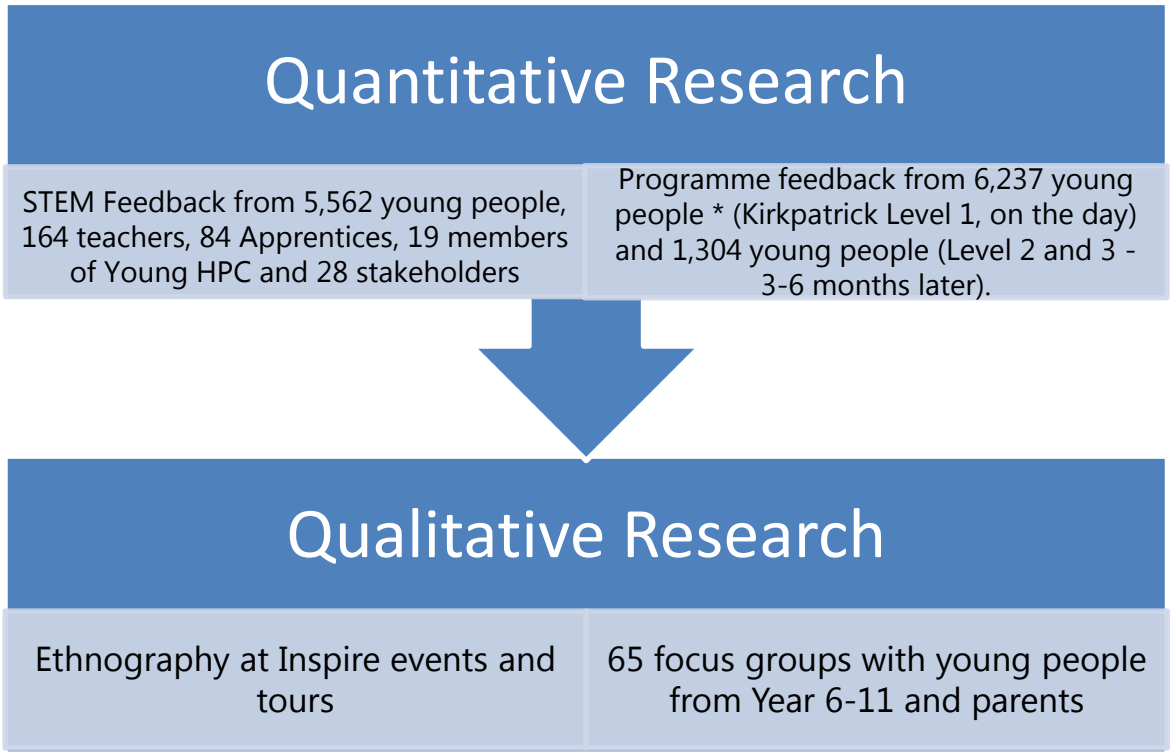
[2] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/725960/HPC_Benefits_Realisation_Plan.pdf

3 Tender Specification GENCO 421: Impact evaluation of Inspire Strategy Tender Specification, January 2014.

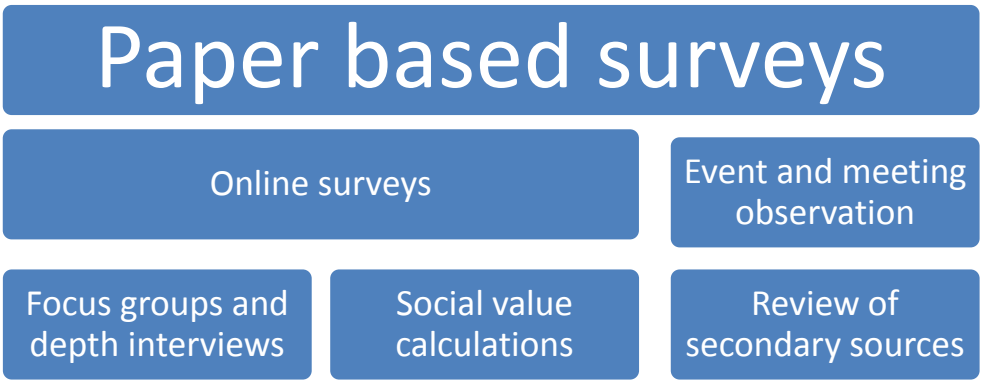
4 http://www.edfenergy.com/energy/nuclear-new-build-projects/hinkley-point-c/inspire.

2 Methodology

The evaluation approach adopted in Year 1-5 (2013/2018) is summarised below.[5]



The evaluation includes a range of research approaches:



[5] * Level one programme feedback at point of delivery carried out by STEMworks. The feedback (2016-2019) comprises 3,772 Year 8 responses and 2,465 Year 9 returns For more on the Kirpatrick Model of evaluating training, please see: https://www.mindtools.com/pages/article/kirkpatrick.htm

Evaluation Aims

The aims of the evaluation are framed in a set of 6 Key Evaluation Questions (KEQs):[6]

KEQ	
1	Did the Inspire Programme successfully engage and inspire the young people of Somerset in the way intended?
2	Did the Inspire Programme lead to increased interest in STEM subjects and career-paths that would not have happened anyway?
3	Did the Inspire Programme raise the capabilities, skills, behaviours and attitudes of young people in the target area enabling them to be more attractive to employers and more readily enter sustainable 'careers' at HPC?
4	Has a legacy been created by the Inspire Programme for 'material' stakeholders?
5	What value has the Inspire Programme created?
6	Has the engagement model been effective (with learning lessons for future intentions to work collaboratively)?

[6] A 7th 'Has the Inspire Programme influenced curriculum development in Somerset schools?' was, after consideration, removed as it was considered unrealistic.

4 Context

Between 2011 (when the Inspire Education Programme started) and 2019 there have been a number of significant changes in the education and skills landscape.[7]

- The importance of STEM skills in the economy has continued to increase, with Britain's exit from the European Union likely to exacerbate availability of the skills required[8]
- An increase in STEM employment in the UK economy overall, but a decrease in STEM employment in the SW.
- The West Somerset Opportunity Area was created in response to significant challenges in social mobility for indigenous young people
- In the education system, the demise of Careers Education was followed by a period of recovery following the 2018 Careers Strategy and the introduction of the 8 Gatsby Benchmarks; with 5) 'Encounters with employers and employees', particularly relevant[9]
- There have been significant reductions in funding for FE, while the Apprenticeship Levy and Degree Level Apprenticeships have been introduced
- On site at Hinkley Point C, 7,800 jobs have been created since 2016, and the 2019 workforce has grown to 3,200 people per day, towards 25,000 at Peak[10]
- Public opinion is less favourable towards nuclear power compared to when the Inspire Education Programme began in 2011.

The Inspire Education Programme's Activities (2011-2019)

The statistics provided by EDF Energy demonstrate what has been achieved.[11] While staffing levels have fluctuated over time, the following has been achieved by a core team of fewer than 3 FTE staff, augmented with increasingly effective and targeted partner resources. The actual number of unique pupils engaged is not captured, as the interactions include multiple visits to the same schools.

TOTAL INSPIRE ACTIVITY MONITORING TO DATE				
	NUMBER OF ACTIVITIES	NUMBER OF INSTITUTIONS PER ACTIVITY	NUMBER OF NEW INSTITUTIONS	NUMBER OF INTERACTIONS
2011	12	19	8	5009
2012	111	221	74	21621
2013	140	257	52	20048
2014	188	399	103	28175
2015	192	318	63	27918
2016	138	171	16	21214
2017	120	309	74	16307
2018	168	304	27	17236
Jan 19 to Jun 19	90	223	13	9528
Total Activity	**1159**	**2221**	**430**	**166,786**

'Total activity (1st September 2011 to 28th June 2019)'

[7] Please see Appendices for a more detailed contextual account.
[8] A November 2017 policy paper, Industrial Strategy: Building a Britain fit for the future stated that "…we need to tackle particular shortages of STEM skills"
[9] https://www.gatsby.org.uk/education/focus-areas/good-career-guidance
[10] https://www.edfenergy.com/energy/nuclear-new-build-projects/hinkley-point-c/local-community/plugged-in/article/building-for-the-future
[11] Source: EDF Energy, S106 Report (July 2019).

5 Key Evaluation Findings

5.1: Did the Inspire Programme successfully engage and inspire the young people of Somerset in the way intended?

Key point:

The evaluation findings demonstrate that young people taking part in Inspire activities were consistently more likely to show an interest in STEM careers and vocational pathways than the overall sample of young people.

Young people and their families are acting on the advice and information given in school, for example by joining the Young HPC programme.

As well as raising awareness about possible STEM careers, the Inspire Programme is also inculcating employability skills in young people, and inspiring them to try harder at school.

This chapter considers the reach and depth of engagement achieved by the Inspire Programme.

Inspire Outcomes

- Over 166,000 pupil interactions have been carried out since the Autumn term 2011, an average of 17,500 per year. To put this figure in context, there are 110,000 young people aged under 18 living in Somerset, and a school population of 69,786 pupils are in state-funded education and 8,317 in independent schools[12]
- The programme has made a contribution to the increase in young people's awareness of HPC from 31% in 2014/2015 to 76% in 2017/2018. There has been a steady increase in awareness of the Inspire Programme in this period from 21% to 30%
- Analysis of data gathered from young people in Somerset between 2014/2015 and 2017/2018 shows that, overall, interest in in STEM subjects has remained broadly consistent. Over this period, on average, 57% of all Somerset pupils believed a career in science to be very or quite desirable, 61% said a career in technology was desirable and 52% considered a career in maths was desirable.

It has been a learning point that young people do not always realise they have been involved in an Inspire programme activity; remembering either EDF Energy or the name of the delivery partner or event. This makes it a challenge to track the impact of Inspire from education into the workplace. Apprentices, looking back, often conflated the influence of the Inspire Programme and EDF Energy more generally. This is plausible, since after leaving school, young people are likely to have also been exposed to other collateral produced by EDF Energy, or (since 2017) joined the Young HPC programme. The Inspire programme

[12] http://www.somersetintelligence.org.uk/education-skills-and-learning/.

also works hard to connect and link in with other EDF Energy initaitves, like ‘Pretty Curious’…

Awareness and recall of the Inspire Education Programme

In 2019, of the 37 Apprentices surveyed who grew up in Somerset, nine (24%) of 37 apprentices could recall one encounter with EDF Energy and / or the Inspire Education Programme and a further 5 (14%) could remember more than one encounter.[13] Together this is 14 (38%) of local Apprentices in the sample.

One older Apprentice reflected on the missed opportunity.

> *"There are so many opportunities within STEM, and EDF Energy as a wider organisation. I wish I had been more switched on to this fact at the time and made better decisions at a younger age."*

Other missed the programme directly but heard about it from younger siblings:

> *"My little brother has had EDF Energy come in a few times, been on trips and it happens now much more. He talks loads about it."*

Overall, 85% of those Apprentices growing up in Somerset describe their encounters with EDF Energy / HPC Inspire Programme as memorable, to at least some extent.

Apprentices could recall site visits, interactive assemblies and engaging STEM days.

"We managed to go on a site visit and I found this really interesting."

"[Inspire assemblies] send across a message that it's a great company to work for and they look after their staff."

"The assembly was very interactive and interesting. This made it engaging to the audience."

Before becoming aware of EDF Energy, 25% of Apprentices were interested in STEM and wanting to work in this area, while 51% were not really interested in STEM (to varying degrees). The Inspire Programme has been an important factor in changing this trajectory.

Further analysis shows that of this group of Apprentices who have, over time, changed their minds and are now working in STEM, 55% (20 of 36) grew up in families without a family member or close relative in a STEM career. Of this group, 45% recall encounters with Inspire or EDF Energy, and nine Apprentices (also 45%) give the Inspire Education Programme 25% 'credit' or higher for their final careers decision.

> *"Inspire was more interactive/hands on than other events and the people working and presenting were very passionate."*

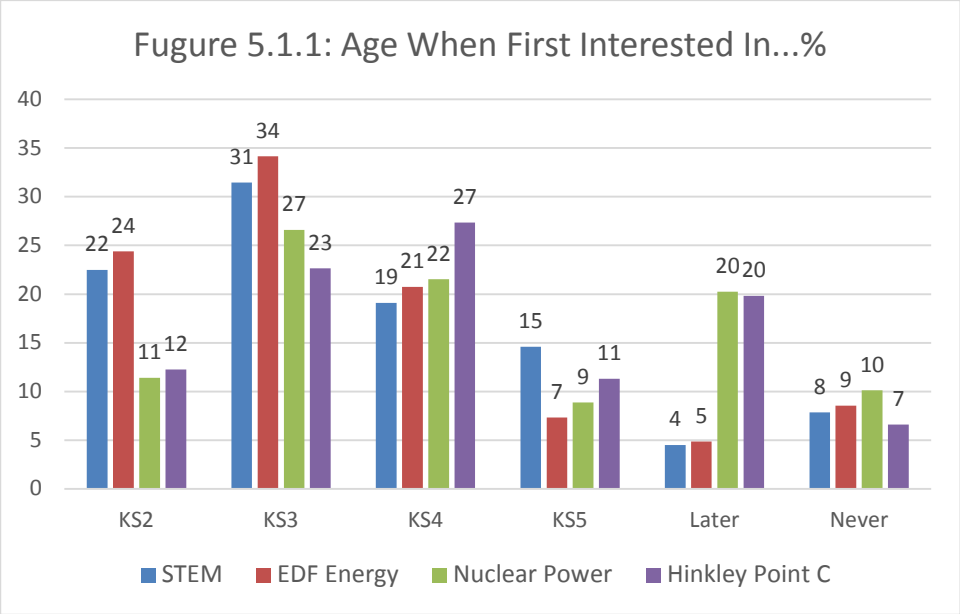
Apprentices talked, with hindsight, about when would be a good age to get young people interested in STEM. Their views differed, but the majority felt that targeting young people in Key stage 3 and 4 was optimal.

> *"Year 9, going into GCSEs makes you think. Everyone is thinking what am I going to do?"*

[13] Assessment centre data supports this finding, with 26% (n-38) saying yes to the question. When you were at School or College, did you take part in any activities or events involving EDF Energy or Hinkley Point C (e.g. a Careers Assembly, STEM Workshop, Careers Fair, Site Tour to a Power Station, etc)?

Figure 5.1 on the next page shows when Apprentices first become interested in EDF Energy, HPC and nuclear power. It demonstrated that interest in STEM and EDF Energy took place before Key Stage 4 for most. Interest in nuclear power tended to take place in Key Stage 3 and 4 (the ages covered by the Inspire Education Programme) while interest HPC generally first occurred at Key Stage 4 or later.

This finding supports Inspire's approach to focus STEM engagement towards younger pupils, becoming more site / job and role specific as they progress.



Number of responses varies as multiple responses were allowed.

Interest in Construction, Engineering and Nuclear

> *"The Inspire Programme is doing a really good job raising awareness about the word of construction." (Contractor)*

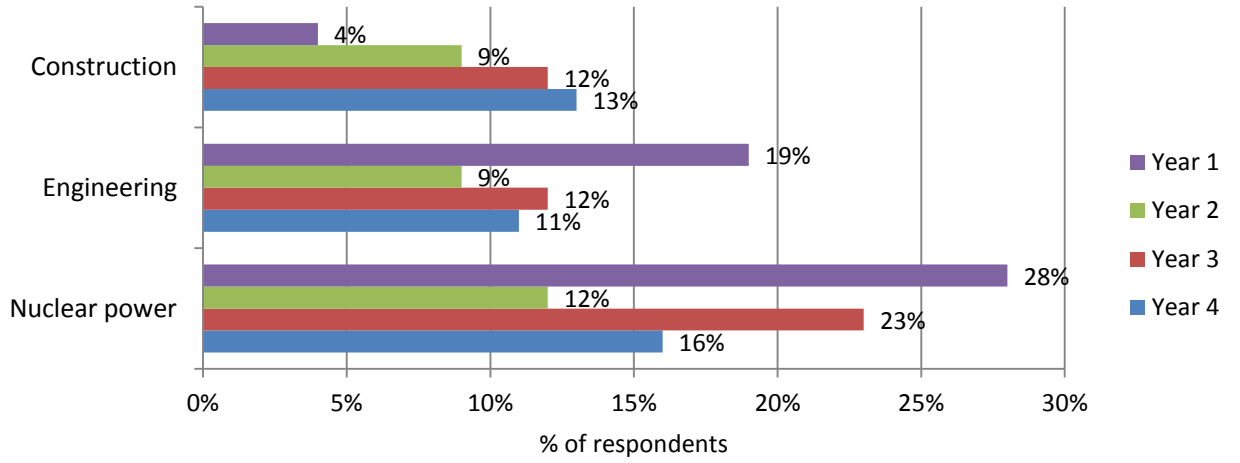
When the views of pupils who have taken part in Inspire events are compared to the wider Somerset school population (Figure 5.2 on the next page), the Inspire Education Programme can be seen to contribute to an 'uplift' in interest in STEM sectors – change that may not have occurred anyway.

For example, across all Somerset young people in 2017/2018, 22% would consider a career in Nuclear Power, compared with 38% (+16%) of those who engaged by Inspire.

Females have shown an increased interest (12% in 2017/2018 compared to 9% in 2015/2016) to consider a nuclear career.[14]

[14] As noted, one of the pillars of the Nuclear Sector Deal is to increase the proportion of women entering the workforce from the current 21%.

Figure 5.1.2: Following an Inspire event, % 'uplift' in interest in a STEM sector career



The 46% who would consider engineering is below a similar national benchmark reported year on year by EngineeringUK (51% of 11-16 years olds would consider engineering).[15] As is seen in the results from previous years, young people who attended Inspire events exceeded this national benchmark (57% who would consider a career in engineering).

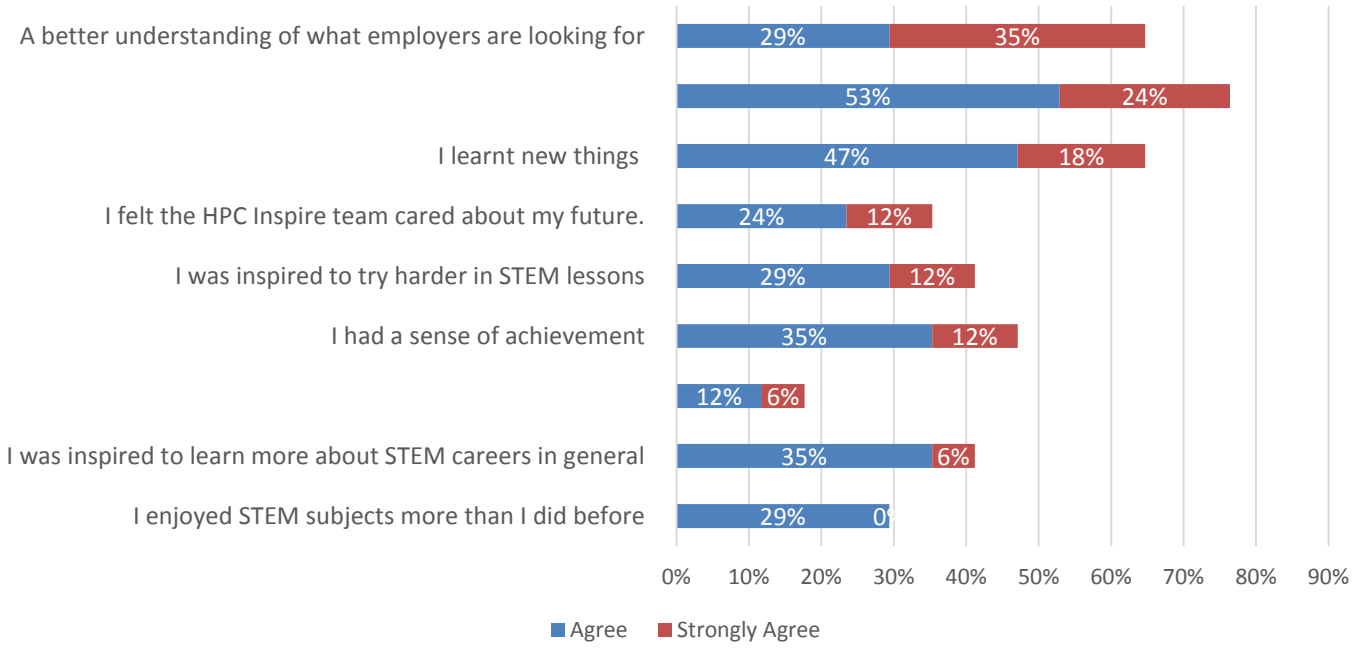
Smaller uplifts were also recorded for Science (5%), Technology (8%) and Maths (3%).

Apprentices

Looking back, Apprentices[16] considered the extent to which the same outcomes had been achieved. As with feedback from young people in Key Stage 3 and 4, the most significant outcomes were 'a better decision about whether a career in this area was right or me or not, as I know where to go for information' (77% agreed or strongly agreed, 'learning new things' (65%) and 'an understanding of what employers were looking for' (64%).

[15] Source: EngineeringUK 2016 State of Engineering Report, page 12.
[16] N=17

Figure 5.1.3: Inspire Programme Outcomes (Apprentices)



N=17 Apprentices

Changing attitudes towards the nuclear sector

Apprentices were asked to consider their attitudes towards the nuclear sector

> *"The whole scale of it to be honest is amazing. The tunneling machine for example that costs £9 million and stays out there. I find it mind-blowing, having something of that magnitude here in Somerset is quite something."*

> *"Most people locally are supportive of the place, it brought people and money into the area. Places that were quiet are seeing more people and business now."*

Qualitative research with current members of **Young HPC**[17]– a programme for 16-21 year olds to support, guidance and resources towards a career on site – described the reaction, and potential outcomes from attending a tour of the site.

> *"I know bits and bobs but I am not too confident in my knowledge of nuclear power. You have to experience it. We are going to an open day at Exeter Uni next week, and they are running a Civil Engineering Course in conjunction with EDF Energy. I'll probably apply for that." (Young person)*

> *"It's such an interesting process to see, with all the different phases. The planning most be mind-blowing. This is tour so worthwhile." (Parent)*

[17] https://www.edfenergy.com/energy/nuclear-new-build-projects/hinkley-point-c/for-teachers-students-and-educators/young-hpc

Family Case study

The case study demonstrates what can happened as a result of an Inspire encounter.

Son: "I found out about Young HPC at a careers event. We saw Cora (Heal) and Tom (Thayer) present. I signed up to an email notification, and found out about this tour. I am at sixth form now [in Bristol], so I am looking at what opportunities there are post 18. Apprenticeship programmes in particular."

Mother: "It was a lovely talk, so we thought we'd find out more. I am keeping an eye on my two children! He inherited a scientific brain doing maths, physics and chemistry. We don't know what path is best. What is the best route to get a degree through working? I grew up in another education system so have no clue.

Young HPC is great for getting into engineering. It's considered difficult to find out which route to take and to see engineers. We should have more of Inspire! This is eye opening and important, and kids will pay attention. We need more people showing kids opportunities. They spend their time locked in their virtual worlds and won't know about the real world. I don't know everything. I need something as a parent to show me. That's Tom."

Something like a tour would be even more effective if apprentices could go into the schools and say 'I do this. I'm not perfect but I can do it and so can you.'"

5.2: Did the Inspire Programme lead to increased interest in STEM subjects and career-paths that would not have happened anyway?

Key points

Over four years, evaluation evidence from school aged Somerset young people shows:

- **The role of parents as the key influencer in careers decisions[18].**
- **The fact that over half of young people in Somerset (56%) have a family member in a STEM job Family members or relatives in a 'STEM' related job.[19]**
- **Current apprentices considered that if they had not been employed at HPC, they would have been in more poorly paid, less fulfilling work, or on another college or university course, career destination unknown.**

The Inspire Programme is one of a number of contributors seeking to raise awareness and interest in STEM and STEM careers. Inspire has consistently promoted Apprenticeships as an attractive career path for young people.

The evaluation has sought to understand the other influences that have a bearing on a young person's choices and career decisions. Parents have been consistently identified as the foremost influence on young people.

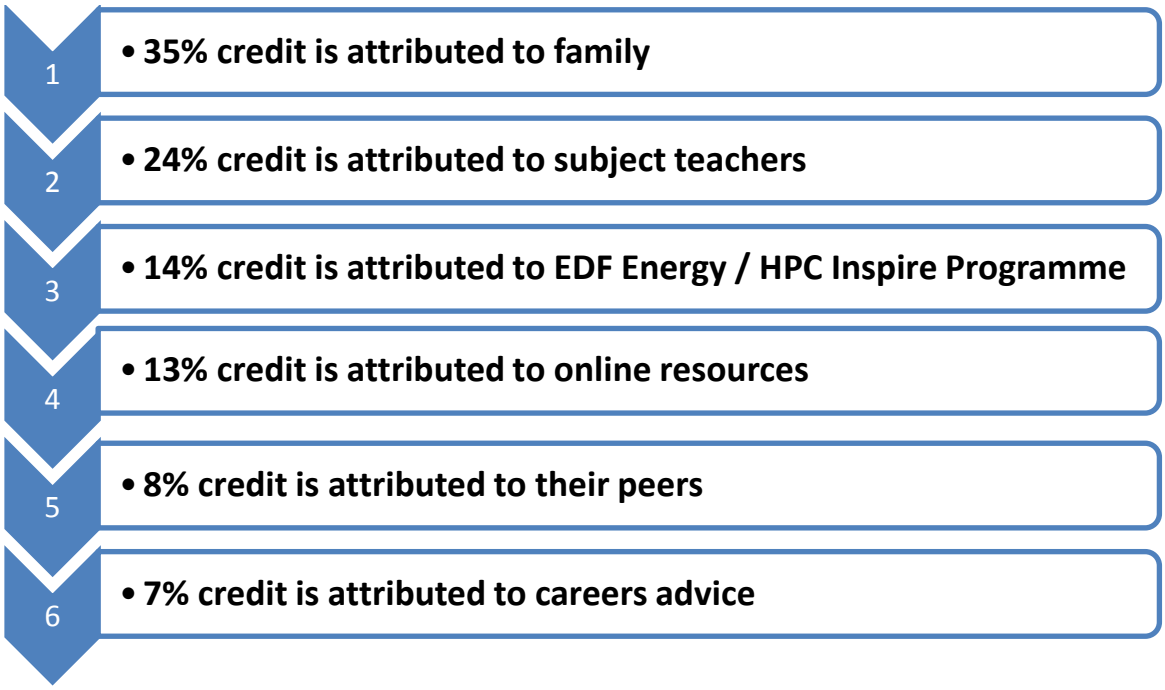
> *"I didn't grow up around here, so the Inspire Programme wasn't an influence. I was working in retail in Weston, getting like £50 a week. It was dire, and my stepdad works here and told me it's a good career. They told me about the qualifications you get and how you can go into different industries. It was my stepdad who gave me the kick up the backside." (Current Apprentice)*

[18] See for example, BIS Project STEM (2014)

[19] Pupils were not, for example, asked to select from a list of STEM careers, and due to space limitations were not asked to say what the STEM related job was

Apprentice Feedback

The current HPC Apprentice cohort were asked how much credit (expressed as a percentage) they thought each of the following factors had on their decision to start a STEM career at HPC.[20] These are ranked in descending order below.



- 32 (out of 59 in the sample) attributed at least some credit to EDF Energy / Inspire ranging from 2.5% to 100%. Looking at just the 32 who attributed some credit to EDF Energy Inspire, the median score was 19% credit.
- Seven Apprentices attributed 35% or more credit to EDF Energy / Inspire programme.

Apprentice case study 1

J grew up in Bridgwater, and went to a state school. His parents both work in professional careers, and he has close relatives working in STEM careers. An apprenticeship was his first choice of career, but he also considered other jobs without paid training. In the end, it was that EDF Energy is a local and trusted company led J to apply.

J was interested in STEM but leaning towards other sectors. He remembers more than one encounter with the Inspre Programme while at school, saying Inspire aways made interesting days and experiences Reflecting on his decision to join EDF Energy, J gave 40% of the credit to his family, but the same proportion, 40% to the Inspire Programme and EDF Energy (with 10% to careers advice, and 10% his own online research).

J says that without the Inspire Programme he definitely would not have applied, and that these encounters 'definitely' raised his aspirations to work in the nuclear industry.

[20] N-59 Apprentices

Inspire Encounters

- The influence of EDF Energy / Inspire on a decision to start a career with HPC is slightly higher for those who recalled at least one encounter at school compared to those who did not have / recall an encounter (16% credit compared to 13% credit).[21]
- Those who have had multiple experiences (n=5) attribute a slightly higher proportion of credit to EDF Energy / HPC Inspire Education Programme compared to those who have only had one encounter or had no encounters respectively 18%, 16% and 13%.

Young HPC

- The Young HPC programme is creating new interest in careers in Construction (36%) and Engineering (36%). Half of respondents were already interested in a career in these sectors. By comparison, 71% of the sample were already interested in a career nuclear power before joining, but for 7% (1 person), this interest has been created.

In a similar fashion, Young HPC has generated greatest new interest in the following roles:

- ✓ Civil engineering
- ✓ Quantity surveying
- ✓ Plant
- ✓ Project controls.

Increased awareness of opportunities and connections

Young people taking part in a HPC tour were seeking new opportunities and connections that could support their next career steps.

> *"Young HPC I think it is pretty good, a stepping-stone into industry, helping you to organise it."*

> *"I came here for a career path. I didn't realise the diverse amount of jobs, I thought it would be straight up construction, but there's also training and engineering."*

[21] As noted earlier, young people do not always recall accurately whether they have had an encounter with Inspire. There are 19 Apprentices who give credit to EDF Energy / the Inspire Education Programme for influencing their decision to start a STEM career with HPC despite not remembering any encounters with the programme at school.

Apprenticeships

- Over four years, on average 59% of young people in Somerset found the apprenticeship route attractive (Year 4: 70%[22], Year 3: 58%, Year 2: 54%, Year 1: 56%).[23] This increasing interest compares favourably to national data.[24]
- Young people who are members of Young HPC showed high levels of interest in Apprenticeships and Degree Apprenticeships (with 93% interested).
- For 70% of the current cohort, an Apprenticeship was their first choice.[25] They were able to provide a number of highlights; including being involved in 'milestone' moments at work, recognition, learning and workling alongside experienced professionals.

"My highlight is seeing the HPC site develop since I started, it's one of the main motivations to come in and see the differences made to such a great project.

Apprentices described how making informed choices and being invested in made them feel.

Sense of being invested in

Current Apprentices remembered how the Employment Affairs Unit had followed up with them.

"I wanted to stay in construction, but I was applying for other jobs. I nearly forgot about this one, but I got a call that reminded me about it. That was an important call for me!"

Once recruited and on site, Apprentices could give a number of examples of how they felt invested in and valued. Including;

"We are invested in heavily. Lines managers are giving and giving. They ask for little, but we get so much."

Increased ability to make informed choices

"If you make good choices, then you get a sense of achievement and wellbeing. So, it all starts with the right subject choices, it takes you into a job that you are good at."

The consequences of not making the right choice is demonstrated by these current apprentices, who also considered what might have happened if they had not been employed at HPC ('the counterfactual).

"I hated my old job, hated waking up. Now I like coming to work now and being relatively happy."

22 This finding is comparable to national research (Sutton Trust 2018) that found 64% of 2,381 young people in 2018 would be very or fairly interested in doing an apprenticeship after leaving school

23 Research from Education and employers found that of those who expressed interest aged 14-15 11% subsequently took action by age 19. Interestingly, this same study noted 'Between the group of young people who never thought about doing an apprenticeship and those who applied and were successful there is a 7% difference in the amount of employer engagements

24 7% of young people want to do an apprenticeship. The survey is based on 5,000 responses conducted by Interserve http://www.tes.com.c.tes.ent.platform.sh/news/further-education/breaking-news/just-7-young-people-want-start-apprenticeship-survey-finds June, 2016

25 Of 63 Apprentices responding, they had made an average of two other job applications.

Counterfactual (the likely alternative scenario)

Apprentices agreed that the likely alternative to their current situation was less positive.

> *"I'd still be doing bricklaying but for another company. I was desperate to try something different. I probably would be on a big housing site."*
>
> *"I would be [in retail] trying to get out here, or probably a foot in the door job. This version of me is definitely more upbeat. I am doing the same number of hours than before, but not doing nights, weekends or Bank Holidays."*
>
> *"I was on an art and photography course, so would just be finishing off my A levels and applying to Uni, not really knowing what I was going to do."*

5.3: Did the Inspire Programme raise the capabilities, skills, behaviours and attitudes of young people in the target area enabling them to be more attractive to employers and more readily enter sustainable 'careers' at HPC?

Key points

- **Feedback from over 6,000 young people in Somerset has consistently shown high levels of aspiration. Consistently, a quarter of young people report that they face barriers to achieving what they want from life.**
- **Feedback from Young HPC members and Apprentices highlights how the Inspire programme is helping to sustain and channel those aspirations towards STEM.**
- **Contractors noted that employability skills remain a challenge, particularly for trade roles, but young people who have been engaged by Inspire are potentially better placed to seize these opportunities as a result of the programme's focus on the importance of these soft skills.**
- **Once in the workplace, Apprentices talked passionately about their new skills, ambition and career opportunities.**

Recent research on the impact of employer encounters with young people at school found four over-arching intended outcomes.[26]

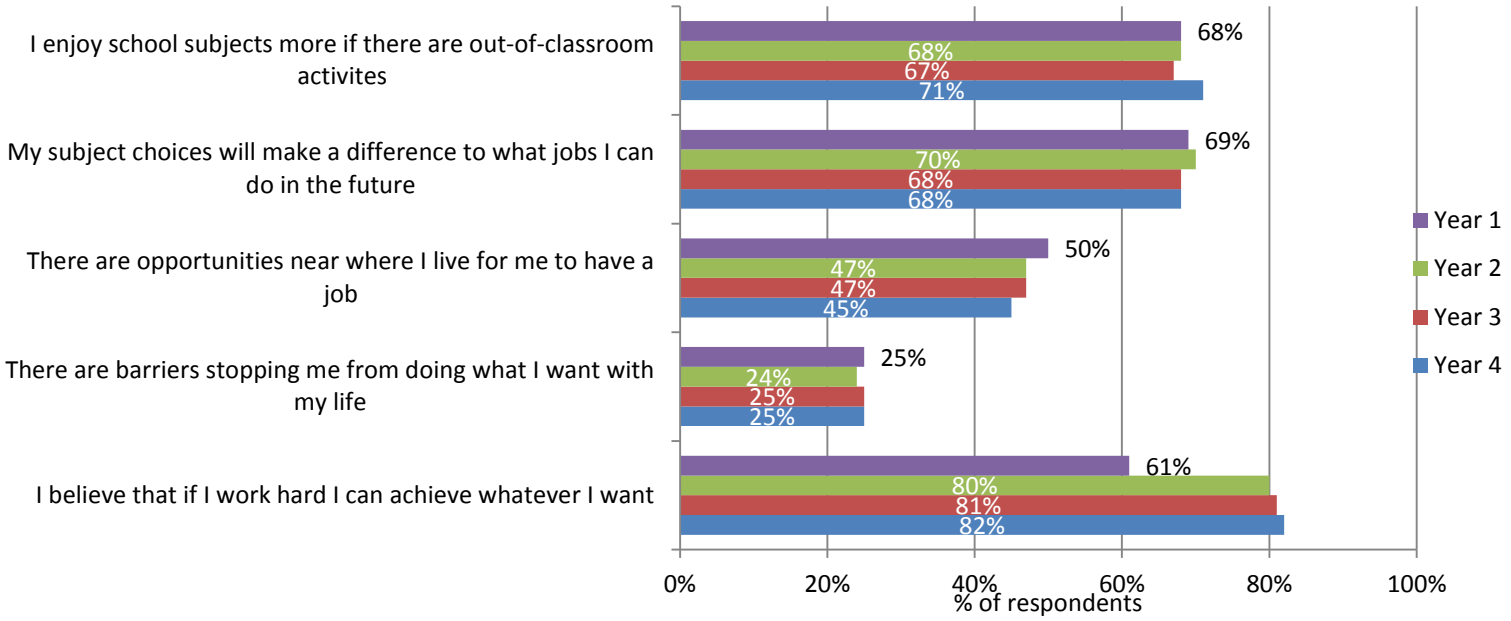
1. enhancing understanding of jobs and careers;
2. providing the knowledge and skills demanded by the contemporary labour market;
3. providing the knowledge and skills demanded for successful school-to-work transitions; and
4. enriching education and underpinning pupil attainment.

Over four years, young people were asked a set of exploratory questions to gather insight on their aspirations (Figure 5.3.1 on the next page). When the Inspire Education Programme began, one of its goals was tackling low levels of aspiration among Somerset young people, but the baseline report (2015) found that empirical evidence to support this assertion is lacking. This finding is corroborated by other national research.[27]

[26] Education Endowment Foundation (2018).

[27] The Education Endowment Foundation found that overall, pupil aspirations are high anyway. The ASPIRES programme (UCL 2013-) also found that 'most young people aged 10-14 hold 'relatively high aspirations for professional, managerial and technical careers', and found no evidence to suggest 'a poverty of ambition.'

Figure 5.3.1: Aspirations



"HPC has created so much awareness in the region. If only 10% of the school pupils are interested, then that's a success. I think so, they can aspire to do something a little different. Tell them early, so it can effect subject decisions. It shows people other paths. For example, we could point to one of our people and say; 'This person was an Apprentice, but now he's a Steelfixer Supervisor earning 70k per year and renting out 3 houses'." (Contractor)

One Contractor disagreed with Inspire's aim to raise aspirations, citing increased awareness as most important:

"We should not denigrate what people want to be. Raising awareness is enough. The Inspire Programme is giving young people an open door into STEM."

The door opening analogy was also used by an Apprentice recommending Inspire:

"Getting involved in this industry, especially with a client like EDF Energy, is a

Apprentices reflected on how their role and education had affected their aspiration.

"I didn't feel entirely that I could do it. Moving forward I realise now that I can. I put quantity surveyors on a bit of a pedestal, I thought, that's for the talented souls. With an apprenticeship they pay for your education. It's made me think about what I might want to do next. It isn't actually that hard once you get in, but you have to really want to do it. If you aren't motivated or not fussed, you won't do so well."

"For me it's raising awareness of different opportunities. I didn't know that this CPCS card was worldwide. Or just how many jobs there were in lifting and cranes. There are massive jobs and opportunities. There's always more than what you think. Your job here can go down lots of different paths."

Aspirations are not fixed, and Apprentices were seeing new opportunities once they were in their roles, which was changing their perspective again:

> *"As we didn't really know what the job was until we started, I think your aspirations develop as you understand your role more, and learn about other parts of the construction industry."*

There was a link between future aspirations and current levels of wellbeing

> *"For me it's buying my own house and having a family, that's what matters. It's also important to get myself right."*

Employability Skills

As well as raising awareness about possible STEM careers, Inspire is also inculcating employability skills in young people, and inspiring them to try harder at school.

- 53% have a better idea of what employers are interested in
- 49% felt inspired to try harder in STEM lessons
- 30% enjoy STEM subjects more than before
- 23% are more likely to study/ choose a STEM career.

Learning point: Attributing long term impact to programmes like Inspire that seek to raise awareness and aspirations is problematic, due the number of years between engagement and entering a career, and the number of intervening factors that play a part in a young person's career decision.[28]

As a 'bridge' between Inspire and the world of work, the Young HPC programme is important in sustaining a young person's initial interest and giving them the means to apply to join the HPC workforce. Without Young HPC it is likely that the impact of Inspire would be reduced as young people would instead be exposed to other influences.

Young HPC

The top three outcomes as a result of Young HPC were:

1. Being inspired to learn more about STEM careers in general
2. Having a better understanding of what employers are looking for in an employee / candidate
3. Looked for careers information about EDF Energy.

- 64% were very likely to apply for a position at HPC, and 36% with EDF Energy. 21% were very likely to study a STEM subject at university and 14% to apply for a job with another STEM employer.

[28] https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/aspiration-interventions/ The EEF also assess the evidence base to connect aspirations to learning to be weak

- 21% (7) remember previous events with EDF Energy, and the most commonly identified benefit was a 'sense of achievement (67%).
- Interestingly, of this small, indicative sample of seven, six say as a result of the Inspire Programme they made different subject choices. Compared to the overall sample, they are more knowledgeable and more likely to recommend Inspire to their peers. This sub group is also more positive about Young HPC than the wider sample.

Young HPC members are able to apply for job and apprenticeship opportunities onsite. As the case study below shows, the skills they are picking up from Inspire and Young HPC potentially place them at an advantage in the competitive application and assessment process.

Contractor Case study 1

In line with EDF Energy, all contractors involved in building HPC are bound by S106 commitments to employ local people. For BYLOR, being local is a recruitment criteria.

"Only two of the lifting technicians are not local[29]. We want that legacy. Sometimes we do need specific qualifications, but above all we need hard working and good team workers. Being punctual, good time keeping. The ability to communicate.

Young people we see generally are not work ready or prepared for working on a site with long hours, etc. School and college doesn't teach them the right mentality.

We want construction to be a more friendly environment. We should share positive stories. It's about getting people aware. We are delivering behavioural training alongside Young HPC and that's a step forward, it should really help

My view is that the Inspire programme is more targeted towards office-based roles and engineering. It is more difficult to inspire young people about trades many have never heard of. We need to be talking about earning potential. There are such good opportunities close to where young people are growing up, I think Inspire is important to connect them to those chances. The Inspire team are so dynamic, and always enthusiastic and on top form. If only there were more of them."

[29] Overall, half of the current cohort of 60 Apprentices are from the local area.

Apprentices

- The largest positive outcome as a result of the Inspire Programme was 'I could make a better decision about whether a career in this area was for me or not because I knew where to go for the information' (69%), followed by 'gaining a better understanding of what employers are looking for' (57%)
- Nine apprentices agreed they made different subject choices as a result of Inspire. Responding to a later question, 12% said that Inspire had some or a great influence on their GCSE choices, and 15% said it influenced their post 16 choices.
- Of young people who grew up in Somerset / Bristol or Avon 18 out of 32 (56%) gave were willing to recommend Inspire to their peers, while 4 (13%) were detractors.

5.4: Has a legacy been created by the Inspire Programme for 'material' stakeholders?

Key points

- **The 'legacy' of the Inspire Programme is first and foremost with the young people who are challenged to be the best they can, and connected to opportunities that help them to realise their potential.**
- **The role played by young people who have been engaged and inspired by the programme in the HPC / STEM workforce are it's most tangible legacy. The Apprentice cohort overall is committed to completing their studies, and to staying with their employer and in the sector for at least the next 2-3 years. Young people with an Inspire background are even more committed.**
- **The programme's thought leadership and leverage is recognised, showing other partners (including STEM employers) what good quality encounters can look like.**

Young people

One of the key drivers for the Inspire Education programme was to engage, excite, to raise awareness and interest in STEM careers, and Hinkley Point C in particular. This would contribute to the local talent pipeline who would ultimately enter STEM careers.

The current HPC apprentices (433 as of May 2019)[30] were asked to consider the future. Specifically, would they complete their Apprenticeship? Were they likely to stay with their current employer? In the nuclear sector? The key findings are presented below:

- 76% of 66 Apprentices responding said they are very likely to complete their Apprenticeship, whilst 20% were quite likely.
- 68% of 66 are very likely to continue working with the same employer for the next 2-3 years and a further 24% are quite likely.
- Those recalling more than one encounter with Inspire / EDF Energy are more likely to continue with their same employer for the next 2-3 years compared to the all sample average (100% vs 73%).
- 39 (46%) are very likely to continue working in the same sector in the next 2-3 years, whilst a further 18 (21%) are quite likely. Those recalling one encounter with Inspire / EDF Energy are the most likely to continue working in the same STEM sector for the next 2-3 years compared to the all sample average (80% vs 67%).

Where do Apprentices see themselves in 3 -5 years' time?

[30] 84 Apprentices completed the survey (19%).

"Back on the ground! I want to learn more, take more tests and exams and see where I can go for it. This has unlocked a want to keep learning."

"In the plant, sat at a desk in a reactor. It's a good job and pays very well for operations."

Stakeholder feedback

- For stakeholders, the ongoing contribution of the programme is the awareness and insights it creates in young people, leading them into both the HPC workforce and STEM careers in the SW.
- The Inspire Education Programme's success is rooted in enduring, proactive relationships with schools and the knowledge transferred to teaching staff.
- Above all, the ability to adapt and respond is one of the programme's main strengths; whether adapting to the changing skills requirement on site (e.g. from groundwork to mechanical and civil engineering), the changing priorities for schools, and the decreasing size and capacity of the Inspire Education Team itself.

"A successful Inspire Programme for my organisation would both provide a clear pipeline of skills workforce for the HPC programme, including both longitudinal nuclear staff and more immediate engineering and other staffing for the build programme. More widely, it will complement wider efforts around STEM, leading to improved achievement and progression rates into STEM careers amongst the SW cohort."

"Young people who are involved in the Inspire programme are able to engage constructively with the issues and opportunities presented by the construction and future operation of HPC."

Furthermore, stakeholders reflected, hypothetically, on what would be most missed if the Inspire Education Programme stopped. Partners also considered the leverage created.

"Inspire is a strong example of a private sector led approach to educational engagement and has provided a range of added value to schools over and above other offers. Its STEM focus is important and, in its absence, thought would be needed over how that gap would be filled for supporting EDF Energy's legacy ambitions."

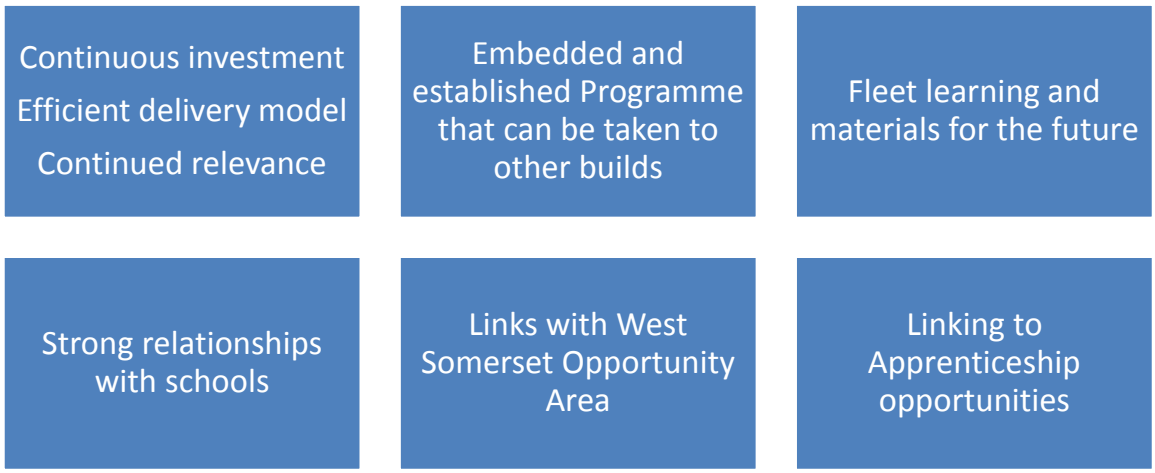
"Inspire is a hugely influential industry partner-led programme that levers in the contribution of others, is often the backbone of the success of initiatives in Somerset, and has supplied a consistently high value range of opportunities for young people. This would be a huge loss to Somerset were it to stop running."

5.5: What value has the Inspire Programme created?

Key points

- **The Inspire Education Programme is complementary to the agendas being pursued by Somerset County Council, education and employer stakeholders. It is seen to add value to the encounters that pupils can access, giving current STEM apprentices and employees the chance to connect and make a lasting impression on young people**
- **The Inspire Education Programme's significant input into the West Somerset Opportunity Area was seen to be innovative, as well as the work with the STEM Talent Academies (together with Tier One partners).**
- **Social value is being generated by the Inspire Programme in a number of ways; by showing how school learning connects to the world of work, helping to shape attitudes that will enable young people to enter and sustain work, challenging young people to be the best they can be, connecting them to opportunities for them to realise their potential**

Reflecting on Inspire's achievements over the 2011-2019 period, some of the many highlights are presented below:



Stakeholders in 2019 noted the following key achievements:

> *"Producing quality materials to link curriculum learning to the workplace. b) This area appears often to be neglected within schools - but making this connection can really help young people understand the connection between school and future life."*

> *"The ongoing engagement with our school community across the piece is a significant achievement, in particular the gradual spread beyond the initial Somerset area into surrounding geographies."*

Wider Programme Benefits

The Inspire Education Programme is complementary to the agendas being pursued by Somerset County Council, education and employer stakeholders. It is seen to add value to the encounters that pupils can access, giving current STEM apprentices and employees the chance to connect and make a lasting impression on young people. The support offered by Tom Thayer to a range of other initiatives (for example, the National Citizenship Service support in 2017/2018) is highly valued.

> *"Significant benefit for the agenda that we are pursuing with schools as well as additional benefit from the role of EDF Energy in illustrating and mobilising other employers."*

> *"HPC is a major STEM project in our region. The Inspire programme gives scientists and engineers who are both directly and indirectly involved with HPC the opportunity to get hands-on experience in dealing with young people, talking about the issues and sharing the opportunities presented by careers in construction and in nuclear. This in turn helps build young people's science capital, giving them the chance to get to know real people in STEM and hear their stories."*

Programme Innovation

Stakeholders observed that the Inspire Education Programme's significant input into the West Somerset Opportunity Area was innovative, as well as the work with the STEM Talent Academies (together with Tier One partners).

> *"Working with the Talent Academies - particularly the STEM one. Totally new and different programme, and EDF's Inspire programme and its T1 partners have enabled this to go ahead in this sector."*

The relative lack of answers to the innovation question highlights, if more resources are available, the need for the programme to continue to innovate and keep its offer fresh and engaging.

> *"Increased variety of engagement approaches when working with schools who have been part of Inspire for some time."*

> *"Make greater use of technology, such as VI welding." (Contractor)*

Future focus

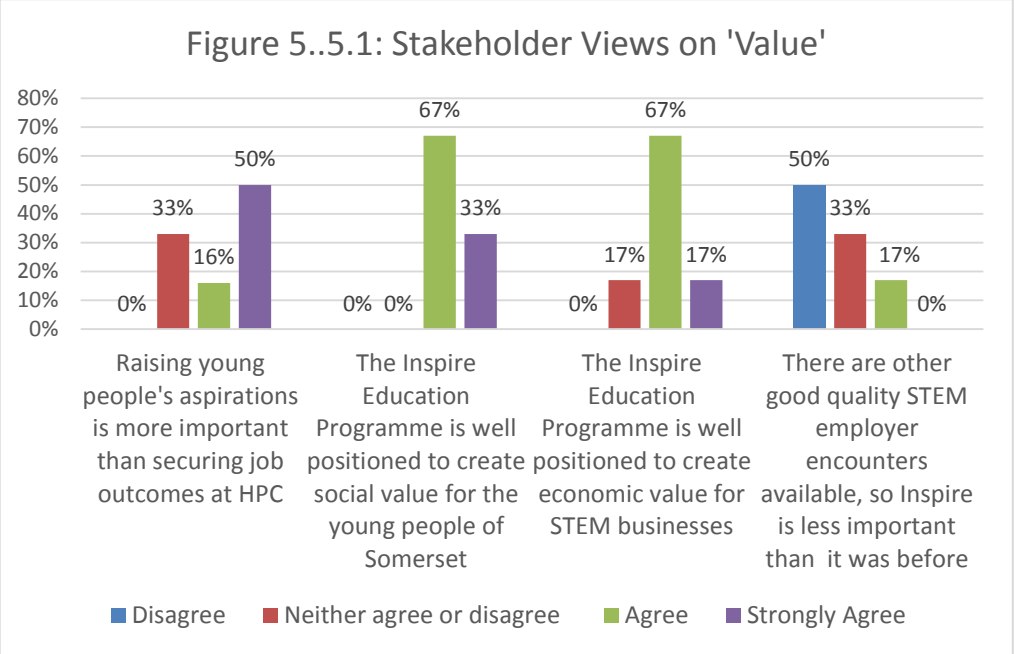
Suggested areas for future focus were:

- Review of curriculum changes and make appropriate alterations to the Inspire programme
- Gain greater recognition on how much HPC Inspire is contributing to Schools' Gatsby benchmark achievement
- Conversion of Inspire participants to Young HPC to Job Service. Schools really value stories to do with their own students to promote.

Social and Economic Value

The six stakeholders responding were asked to respond to a series of 'value statements'. As Figure 7 below shows stakeholders place higher value on raising young people's aspirations than on job outcomes *per se* and agree the Inspire Education Programme is well placed to create both social and economic value.

The majority disagreed that there are other quality employer encounters available (which would reduce the need for the Inspire programme).



N=6

Stakeholders assert that social value is being generated by the Inspire Programme in a number of ways; by showing how school learning connects to the world of work, helping to shape attitudes that will enable young people to enter and sustain work, challenging young people to be the best they can be, connecting them to opportunities to enable them to realise their potential.

> *"Expanding the horizons of young people beyond the stereotypes and traditions they are developing with."*
>
> *"Illustrating the link between curriculum learning and employment - demonstrating quality local employment opportunities - challenging young people to aspire to these roles."*
>
> *"Providing high quality learning and STEM related knowledge to all students, including those furthest from the market, providing badly needed support for aspiration and ambition amongst those who traditionally may not consider or feel able to access a STEM career or see HPC as a viable career opportunity."*
>
> *"Helping young people adopt a healthy attitude towards the world of work, value their contribution and it provides the early routeway to economic wellbeing in their future."*

5.6: Has the engagement model been effective (with learning lessons for future intentions to work collaboratively)?

Key points

- **5 out of the six stakeholders responding (half of whom are very involved with Inspire) consider that the Inspire Programme works very effectively or effectively in partnership.**
- **Stakeholders highlight the Inspire Education Programme's collaborative culture and drive to add value.**

Stakeholder views

The delivery of Inspire's key interventions are achieved through effective partnership working between EDF Energy and key stakeholders including the Heart of the SW LEP, West of England LEP, Tier One Partners, Careers and Enterprise Company (CEC), Somerset EBP, the National Citizenship Service, Sector Skills bodies, Engineering UK, Somerset County Council, Sedgemoor and North/West Somerset District Councils.[31]

Contractors agreed that the Inspire Programme is "*doing a really good job"* but would benefit from more resource – both to deliver, and to also support contractor initiatives.

Stakeholders were asked to reflect on how well the Inspire Programme worked in partnership. The feedback points to the give and take required to make partnerships work in a sustained way, and the challenges for Inspire to be both strategic and operational. This last finding supports the planned change in governance structure from 2019/2020. [32]

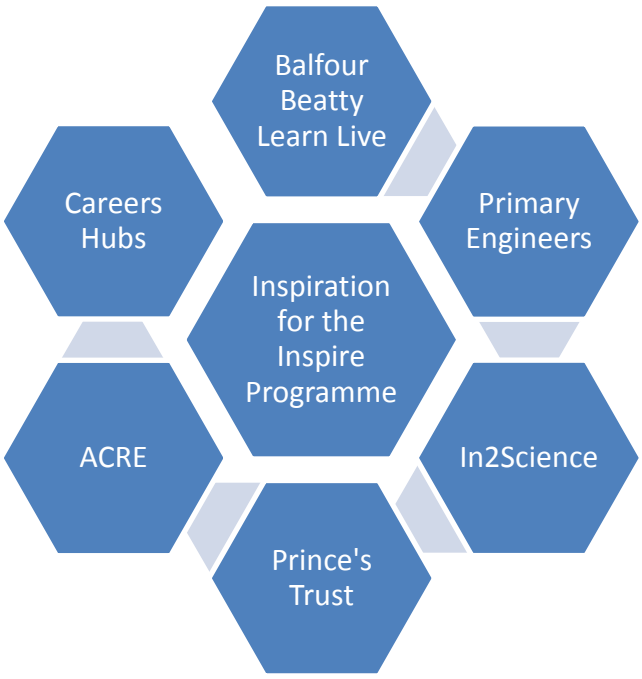
> *"The EDF Energy team make it their business to know what is going on, what is current, and what is the most effective product/initiative to align the programme with to either add value to an existing effort, or to utilise a comms stream to get the message out there. Nothing is ruled out without discussion."*
>
> *"Overall, the cross working with the team has been positive. The value of EIOG has been more mixed, as the meetings tend to struggle to find the right balance between operational and strategic."*
>
> *"The Inspire programme has a clear ambition to work in partnership with every stakeholder - education, training partners, contractors, 3rd sector, etc. However, it is clear that EDF Energy is the senior partner and where conflicts of priority exist then it can be difficult to exert influence on the direction of the programme from the outside."*

[31] Source EDF Energy S106 Report July 2019

[32] From 2019/2020 the EIOG meeting will be replaced by a thematic set of workstream meetings under the Workforce Development Strategy, designed to encourage collaboration and knowledge sharing. Source: EDF Energy S106 July 2019.

Comparable Programmes

Inspire is an adaptable model, and since 2011, there are other engagement programmes that have launched.[33] Going forward, stakeholders pointed to other programmes that the Inspire Programme could learn from (and vice versa).



> *"There are programmes that demonstrate a better understanding of young people and the barriers they face, such as In2Science."*

In2scienceUK is an interesting example. This charity is tackling similar issues to the Inspire Programme by offering placement opportunities, with a stated ambition to provider 2,000 per year by 2022.[34]

While there are many challenges to offering placements on a live nuclear new build site, it is an area of interest to both the programme's Education and Skills Manager, and to stakeholders, albeit via a digital route: *"Digital/video to support school based and sixth form based careers input."*

Contractor case study 2

Balfour Beatty is a principle contractor on the HPC build. With 400 staff currently working on site, onboarding continues as tunneling operations get underway.

"As contractors, we all have the mindset that we are representing HPC. The Inspire Programme has remained contemporary, but there is lots more the contractors can offer, such as webcam sessions, VI and digital involvement. It is hard when there is little appetite from schools, so we are grateful for the relationships Inspire has developed and nurtured with them."

[3333] It is noted that there are no published independent evaluations of these programmes to compare with Inspire.
[34] Source: In2Science Impact Report (2018) https://drive.google.com/file/d/1HbXTNQwoRRJ4R00XfJLX2ZmgoVVEO67K/view.

5.7 Social Value

There is no single, accepted definition of social value. Chris White MP, who led the campaign in Parliament to introduce legislation on Social Value provided the following:

> *"We mean 'value' not in its narrow (financial) sense but in its true sense – recognising the importance of social, environmental and economic well-being across our communities and in our lives"*[35]

The creation of social value is in keeping with the original Dillington Vison[36] to

a. Raising awareness and interest among young people of STEM in the catchment areas of Bath and North East Somerset, Mendip, Sedgemoor North Somerset and South Somerset
b. Connecting them to further opportunities and careers information
c. Supporting the talent pipeline required to deliver the first nuclear new build power station in a generation in the UK.

The 'impact map' below charts the different types of social value contributed to by Inspire.

<table>
<tr><td>Short term outcomes</td><td colspan="3">New Experiences</td><td colspan="2">Increased awareness of opportunities and connections</td></tr>
<tr><td rowspan="3">Medium term outcomes</td><td>Sense of achievement</td><td>New skills developed</td><td>Sense of being invested in</td><td>Breaking down barriers to, and between, subjects</td><td>Increased ability to make informed choices</td></tr>
<tr><td colspan="2">Raised aspirations</td><td colspan="2">Increased self-esteem and sense of worth</td><td>Changing attitudes towards the nuclear sector</td></tr>
<tr><td colspan="5">Different educational choices</td></tr>
<tr><td>Long term social value</td><td colspan="5">Improved employment outcomes</td></tr>
</table>

Utilising the accepted seven-principle approach to gathering social value evidence[37], the evaluators have gathered evidence between 2015 and 2019 to produce this initial assessment of social value.

[35] https://knowhow.ncvo.org.uk/funding/commissioning/procurement/importance-of-social-value-to-commissioning-and-procurement

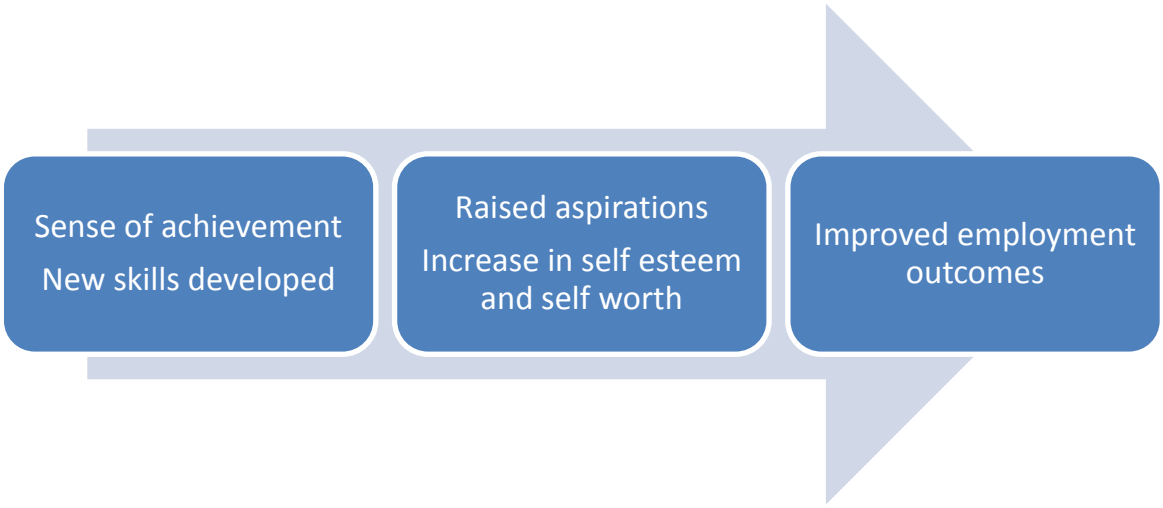
[36] "To ensure the HPC development maximises employment and skills opportunities for local people, whilst inspiring young people to achieve and seek to follow careers in the science, technology, engineering and manufacturing sectors." Source: https://www.somersetwestandtaunton.gov.uk/media/1161/adopted-hinkley-point-c-2011.pdf

[37] http://www.socialvalueuk.org/app/uploads/2016/03/SROI-Principles_singles_28A.pdf

This evaluation draws on:

Short term outcomes	Young people (Years 6 to 11) who have been involved in an Inspire encounter, based on a sample of 1,304	Wellbeing gains monetized using 'Quality adjusted Life Years' (QALYS)[38] [39]
Medium term outcomes	Apprentice feedback (based on a sample of up to 84, then extrapolated to the total number of apprentices (423)	Wellbeing gains monetized using 'Quality adjusted Life Years' (QALYS)
Long term social value	Wellbeing and employment outcomes based on apprentice feedback. Apprentices are segmented by their prior level of interest in STEM.[40]	The UK TOMS framework for the social value of apprenticeships[41]

In order to calculate social value, the following outcomes from the longlist in the impact map above have been assessed.



The connection to improved employment outcomes aligns well with a recent finding from the Education Endowment Foundation:[42]

> *"A review of the 42 studies shows that young people may be expected to gain something of value from their participation in employer engagement activities: economic benefits as young adults can be sizeable despite typically modest gains in academic achievement. While individual responses will necessarily differ, most commonly, an authentically-perceived experience of the labour market drives positive change."*

[38] New Economy Working Papers: 'Social Value: Understanding the wider value of public policy interventions.' (2012)
[39] In order not to overclaim the impact of the programme on wellbeing, a prudent estimate has been to give a score of 25% credit to Inspire for young People who strongly agreed the programme had made a different and 10% to young people who said that Inspire had made some difference to their decision.
[40] A prudent estimate has been to give a score of 25% credit to Inspire for young people who strongly agreed the programme had made a difference, and 10% to those who said that Inspire had some bearing on their decision.
[41] As the employment outcomes for the overall HPC build are being gathered in a separate study, it was decided to omit them here so as to not to duplicate, or potentially double count. For more information about the wider value being created, please see https://www.edfenergy.com/energy/nuclear-new-build-projects/hinkley-point-c/local-community/plugged-in/article/building-for-the-future
[42] Education Endowment Foundation. 'Employer engagement in education: Insights from international evidence for effective practice and future research' (2018).

Creating social value, one encounter at a time

The extent or degree of change created by the Inspire Education programme depends on the starting point and disposition of each young person interacted with. The added value of the Inspire Programme to further convince a young person with high STEM capital and already set for a career in this area is less than for a young person who was unsure or heading in another career direction before being 'inspired'.

Using a recognised approach to placing a monetary value on these intangible outcomes, the evaluation team has estimated, excluding earnings, that the gains in social value that can be credited to the Inspire Education Programme are between £1.395 million and £1.732 million.[43] This has been achieved principally through raising aspirations and connecting young people into improved employment opportunities at Hinkley Point C and across the wider STEM sector.

The social value generation begins with young people at primary school. In 2018. 20 out of 21 schools reported that a primary STEM festival had led to a sustained increase in pupils' enthusiasm:

> *"Back at school, children were saying how amazing it was and that they would love to be better at science so they could do experiments." (Primary school teacher)*

While there is no statistical correlation between the Inspire Programme (or any other programme designed to improve aspiration) and education attainment, teachers are able to provide stand out examples.[44]

> *"After completing the year 10 program, Student X is determined to go into the field of engineering. He wants to work at Hinkley. He has performed well in his PPE's (mock exams) and has a clear understanding of how to achieve his chosen career."*

Social value.

Headteachers were asked to consider how the Inspire Education Programme was creating social value. Their responses all show the link between employment and social value.

> *"The higher profile enables pupils to engage with debates about green, renewable and nuclear energy."*

> *"Showing young people, regardless of their background, that they have the potential to join the workforce."*

> *"Supporting young learners to engage with and have opportunities to understand the wider working world and how education is used in real life."*

Young people segments

[43] This total has been derived from a sample of young people in school, and current apprentices. The apprentice sample has then be extrapolated to all current apprentices. The difference between the figures is based on assuming that all of the credit to the Inspire Programme will drop off by the end of the first year of the apprenticeship, and the second by assuming that the outcomes from the first year will continue, dropping by half in year 2. This assessment does not include apprentices who will be recruited in the future, as while the Inspire Education Programme continues, the future level of investment is unknown.

[44] Interestingly, of the small, indicative sample of 7 Young HPC members who recall Inspire while they were at school, 6 say as a result of the Inspire Programme they made different subject choices.

Young people are not a homogeous group, and therefore the social value calulation has been moderated by sub-dividing them into the following segments:[45]

Apprentice Segment	Proportion of Apprentices	Changes valued
Not at all interested in STEM	22% (this is estimated to be 93 of the current cohort)	• Better quality of employment (wellbeing) • Increased earnings (lifetime earning potential)
Not very interested in STEM	29% (123 of the current cohort)	• Better quality of employment (wellbeing) • Increased earnings (lifetime earning potential)
Some interest in STEM before (but leaning towards other subjects)	21% (89 of the current cohort)	• Better quality of employment (wellbeing) • Increased earnings (lifetime earning potential)
Already interested in STEM and opting for a STEM career	28% (118 of the current cohort)	• High level of deadweight, but potential wellbeing and economic outcomes

Social background

- In total, 15 (18%) in the Apprentice sample were eligible for Free School Meals, whilst 60 (71%) were not. This is more than double the national benchmark.[46]
- Overall**,** 24 (29%) of Apprentices said that compared to people in general, they would describe themselves as coming from a lower socio-economic background.[47]
- There are 9 (11%) people in the sample self-reporting that they have physical or mental health conditions or illnesses lasting for 12 months or more.

The available evidence has established a link between a person's place of birth and health, and their education attainment and social mobility. This finding, albeit indicative, suggests that Inspire and the HPC project as a whole is making a positive difference to the opportunities for young people with fewer life chances than their more affluent peers.[48]

Analysis of 16 apprentices who grew up in the Bridgwater area showed that 9 (56%) came from the 20% most deprived parts of the town (based in the Index of Multiple Deprivation) and 3 (19%) from the next decile.[49]

[45] The segments are based on data gathered from Apprentices and Young HPC members. N= 72 Apprentices providing a response and 19 members of Young HPC.
[46] EngineeringUK, Social mobility in engineering (2018). "Just 7% of apprentices at this [Level3] had been eligible to receive FSM when they were in school."
[47] Of those growing up in Somerset or Avon, the proportion is higher, 35%. Further analysis shows 9 of the 15 respondents eligible for free school meals also described themselves as from a lower socio-economic background. 12 respondents describing themselves as from a lower socio-economic background were not eligible for free school meals. 2 out of 9 young people with limiting conditions were eligible for FSM but 4 out of 9 said that compared to other people they were from a lower socio-economic background.
[48] 2019 findings show that pupils who are persistently disadvantaged (defined as eligible for free school meals for at least 80% of their education) are 22 months behind average attainment by the end of key stage 4. https://epi.org.uk/publications-and-research/annual-report-2019/
[49] Maps produced, with thanks, by Somerset County Council based on 2015 IMD data. Somerset County Council uses LSOA boundary data and a 'Somerset Decile' ranking from 1 – 10. http://www.somersetintelligence.org.uk/files/Indices%20of%20Deprivation%202015%20-%20Somerset%20Summary.pdf

"I believe there is little opportunity in the Bridgwater area, the HPC project gives people the chance to gain qualifications and skills that wouldn't normally be available.

HPC has given me the chance to better my standard of life and helped me secure a future career in the industry.

87% of Apprentices from Somerset, Bristol or Avon agreed that it was important for the Inspire Education Programme / EDF Energy to be active in schools to raise awareness and aspiration and promoting employment opportunities at HPC

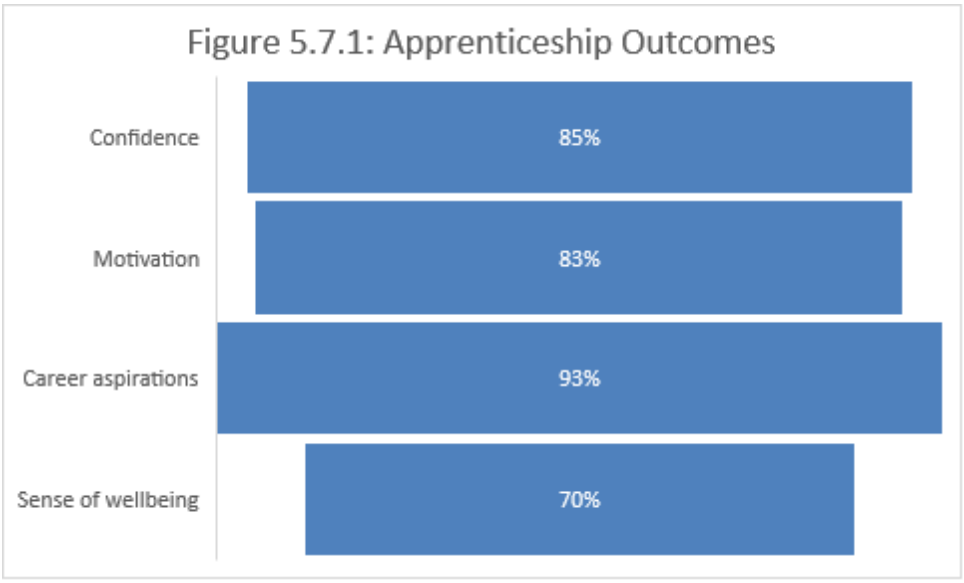
I believe the Inspire Programme to be a good thing and would actively encourage others." (Apprentice)

"I learnt a lot about Nuclear careers."

"Local opportunity at HPC and the surrounding local businesses will be looking for employees skilled in different areas of STEM."

For 35% of the Apprentices growing up in the county, the Inspire Education Programme was an influencing factor in their decision to seek work in Somerset.[50]

Apprentices described the social and emotional outcomes as a result of their Apprenticeship:



N=84 (Combined 'some' and a 'great deal of difference')

[50] Image source: https://www.edfenergy.com/sites/default/files/edf_4904_plugged_in_winter_8.18_15_aw.pdf

New skills

The case study below shows how one life has been changed as a result of securing an apprenticeship at HPC.

Apprentice case study 3

Apprentice Y grew up in the Bridgwater area and is in her 30s. She is an Apprentice with one of the main contractors, Bylor.

"It was a once in a lifetime opportunity, they were looking to break away from the stereotypical employee giving me the opportunity to gain a new skill set and build a career."

Her parents worked in routine manual and service roles and she attended a secondary school. She describes herself as coming from a lower socio-economic background gaining new skills and being given an opportunity of a lifetime in an industry that would normally be hard to break into being a woman

I feel as though I have been given a great opportunity to better myself and my career prospects because of the project. I feel I have embraced the ethics of the project and have bettered myself by earning a new skill set with the apprenticeship scheme. I am very grateful for this opportunity and am excited to see what the future holds for me and where the skills I have learnt will take me.

Increased self-esteem and sense of worth

Apprentices connected feeling intellectually challenged and fulfilled at work to their self-esteem and sense of self-worth.

> *"I get a great sense of job satisfaction; I have contributed to the big machine. There's a challenge as well as an achievement here. Before I was doing what, I had to do, working on the line. Here different problems arise. Thinking creatively, innovatively to work to a solution."*

> *"Compared to some of my friends at Uni, you can hear them say 'I wish I could do that'. Other people's opinions give me a sense of achievement. The sense of achievement as an 18-year old on a major adult site is massive."*

Wellbeing

Feeling invested and supported was also seen to lead to improved wellbeing.

> *"Definitely. Continuous development keeps people on their toes and happy. The company values what we are doing."*

> *"We are invested in heavily. Lines managers are giving and giving. They ask for little, but we get so much."*

When asked to place a (notional) financial value on aspirations, the view of one Apprentice (and met with nods by the other Apprentices) was:

"You can buy 100 iPhones with aspirations, or 10 new cars. You can go as high as you like and get a real sense of achievement. And it makes the job better."

Improved employment outcomes

The final component of social value examined here is improved employment outcomes.

- 95% of Apprentices agreed or agreed strongly that it was important for them to be in a job that they find rewarding and that suits their skills.
- 75% Young HPC members agreed that Young HPC made them consider a career in nuclear power.

"I've been introduced to people that helped me in my successful application to do a degree apprenticeship in civil engineering with EDF Energy. I have been frequently contacted in a very personable way which has made me very comfortable with the more formal emails than I was before. I have also been on multiple tours of the site which has further developed my interest in the construction of HPC." (Young HPC member)

Earning and earning potential is one aspect of employment. While actual earnings at HPC is outside the scope of this analysis, we observe that HPC Apprentices are better paid than the average apprenticeship salary, and workers at HPC earn more than the average earnings for Sedgemoor district.[51] Another aspect is the sense of fulfillment and wellbeing that comes from having a career rather than 'just a job'. Two examples below (the first from BrIdgwater, the second from West Somerset) show how this has benefited two current apprentices.

Apprentice case study 4

"I did an apprenticeship in hairdressing which I did for a few years. I don't particularly remember anything [about HPC] at school but I left seven years ago [2011/2012, the year Inspire began]. I was working in a factory near the Innovation Centre, and a lot of people at the factory had all left to go to HPC, so I applied for the Job Service and saw Young HPC as a route in.

Getting an apprenticeship was much more important to me as it was a career rather than a job. A career is something transferable. I want to stay on the project for the next few years, but can take this into other areas, countries and projects."

Apprentice case study 5

"This whole construction thing has come out of the blue, I was a store manager in retail before. HPC is the biggest opportunity locally to earn a decent wage. I went to a family day as my girlfriend works here. I handed in my CV and got a call 7 months later from the manager of the lifting operations asking if I was still interested. I had the telephone interview then the assessment day and here I am!"

[51] The Average apprentice salary £170 per week, or £8, 840 per year(gross pay). https://www.allaboutschoolleavers.co.uk/articles/article/24/apprenticeship-wage. The median gross weekly for Sedgemoor is £26.3k for males and £19.3k for females. https://www.plumplot.co.uk/Somerset-salary-and-unemployment.html The average pay for UK 18-21 year olds is £345 per week (male) and £323 (females). https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/bulletins/annualsurveyofhoursandearnings/2018

6 Conclusions

Did the Inspire Programme successfully engage and inspire the young people of Somerset in the way intended?

The evaluation findings from 2014-2019 demonstrate that young people taking part in Inspire activities were consistently more likely to show an interest in STEM careers and vocational pathways than the overall sample of young people. The evaluation evidence from apprentices helping to build Hinkley Point C suggests that the programme is particularly effective at inspiring young people who are interested in STEM subjects but leaning towards a different career. Where a young person has low 'STEM capital' (i.e without have a family member or close relative working in STEM), then Inspire is well placed to raise awareness, and then aspiration that this path is possible. Young people who recall more one or more encounters with Inspire were generally more positive, both at school and in the workplace.

The Inspire Programme is considered to have made a difference to young people's engagement with STEM in the short term, but, albeit based on a small sample, on their subsequent subject and career choices (particularly post 16).

The programme has adapted in light of insight, feedback from young people, the changing education landscape and the progress of the HPC build.

Did the Inspire Programme lead to increased interest in STEM subjects and career-paths that would not have happened anyway?

Conducted over four years, research with school aged Somerset young people demonstrated the key role played by parents in careers decision-making. Over half of young people in Somerset (56%) have a family member in a 'STEM' related job – so are already more likely to pursue a career in this area.

Contractors recruiting for site roles in 2019 agreed that the connecting role played by the Inspire programme enabled them to showcase the careers they have to offer as the build moves into the MEH phase (Mechanical, Electrical and HVAC - heating, ventilation and air conditioning). Feedback from Young HPC members, (who are a step closer to the labour market) shows high levels of awareness for some of these roles as a result of their links with the programme.[52]

> *"The types of activities provided to young people through the Inspire programme are like gold dust. They are incredibly important to schools and young people. As a huge local employer, I see EDF Energy's responsibility to engage and enthuse the future local workforce, be that directly, through Tier 1 contractors or supporting industries. EDF Energy appear to take this responsibility seriously." (Head teacher)*

Teachers and schools have a significant part to play to sustain and focus a young person's interests. Feedback from teachers revealed their levels of awareness about HPC are lower than both the Somerset population, and the young people they teach. Teacher engagement

[52] Young HPC has generated greatest new interest in the following roles: Civil engineering, Quantity surveying Plant and Project controls

remains an area where the programme lacks the capacity to reach the volumes of staff capable of inspiring large number of young people.[53]

Did the Inspire Programme raise the capabilities, skills, behaviours and attitudes of young people in the target area enabling them to be more attractive to employers and more readily enter sustainable 'careers' at HPC?

Aspiration and awareness are key enablers to enable young people to develop skills and grow in confidence to the point they become employable. While feedback from nearly 6,000 young people in Somerset has shown consistently high levels of aspiration, a quarter of young people consistently report that they face barriers to achieving what they want from life. A programme seeking to create social should seek to engage with young people facing additional barriers. No programme can realistically inspire everyone, but in the words of one stakeholder:

> *"Many young people do not need their aspirations raising. Securing economic wellbeing, at whatever level, is important. Aspiration often comes later when they realise what will help them move forward in their careers. So, a healthy balance of getting a job, and information on what the possibilities are is more important. Some young people are not emotionally mature enough nor confident enough to aim high at such a young age, but they can have their horizons broadened for the future whilst they find their feet."*

Apprentices and contractors agreed that behaviours and attitudes were a critical factor in finding a role in the STEM workforce. Feedback from the current cohort of Apprentices does indicate that the programme is making a positive difference to the ambition and attitude of young people.

Has a legacy been created by the Inspire Programme for 'material' stakeholders?

Young people are the most important stakeholder in the Inspire Education Programme. The careers chosen by some of those who have been engaged and inspired by the programme is one tangible legacy from Inspire. The Apprentice cohort overall is committed to completing their qualifications, and staying with their employer and in the STEM sector for at least the next 2-3 years. Young people with an Inspire background are more committed still – suggesting that EDF Energys's Inspire programme interventions have the potential for enduring longer-term impacts if success is measured in future by the retention in STEM careers.

The 'legacy' of the Inspire Programme is also broader. With each pupil interaction (with an average of 17,500 per year) young people are challenged to be the best they can, and connected to opportunities that help them to realise their potential. The vast majority of Apprentices agree strongly that the Inspire programme is needed to continue to raise awareness and interest in STEM career pathways.

[53] Please see the recommendation to collaborate with the STEM Learning Centre.

The programme's thought leadership and leverage is also recognised by other stakeholders; demonstrating to other partners (including STEM employers) what good quality encounters look like. At an operational level, the relationships developed and trust nurtured with schools across the county over nine years are (and will continue to be) very valuable to a range of stakeholders looking to access young people.

> *"We have worked alongside EDF Energy for almost 10 years…Their contribution to our school has been significant and we are incredibly grateful for what they offer in terms of time, value add and discretionary effort." (Headteacher)*

What value has the Inspire Programme created?

Key stakeholders agreed that the Inspire Education Programme is well positioned to contribute to both social value (through raised awareness, aspiration and opportunity) and economic value (by supporting the STEM pipeline into HPC and the wider STEM sector).

The Inspire Programme has played an important part in supporting a diverse set of young people to enter careers that they find fulfilling and financially rewarding, earning higher than average salaries. The positive engagement of females in STEM has been a key ambition for EDF Energy and the Inspire Programme and the proportion of female apprenticeship starts at HPC is considerably higher than national figures.

Partners disagreed that there were comparable programmes also operating in the county. The regional coordination role played by the Programme's lead, Tom Thayer is considered to have added value; and served to align the outcomes sought from industry and education.[54] During the period from 2015-2017, before the current careers education infrastructure was in place, the Education Inspire Operations Group operated as a de facto careers committee for Somerset.

EDF Energy's cornerstone role in the West Somerset Opportunity area, which built on substantial support to West Somerset College, is a strong demonstration of a commitment to create social value and contribute to wider social mobility ambitions in this locality.

The sustained focus and commitment of the programme, and the efficient way it operates has also generated important learning. For EDF Energy, the approach, learning and outcomes created by the Inspire Education Programme are transferable and relevant for other new build projects. Having a programme and team embedded in an area over time has been one of the main success factors (and also a likely reason why gaining traction in Bristol and Exeter is proving slower and more challenging than hoped).

Has the engagement model been effective?

The small size of the Inspire team makes collaboration a necessity. The scope for the Inspire Programme to coordinate school engagement for all HPC contractors is a longer-term undertaking. Five out of the six stakeholders responding in 2019 consider that the Inspire

[54] Social value creation and relational coordination in public-private collaborations *Journal of Management Studies* by Nigel D. Caldwell**,** Jens K. Roehrich, Gerard George. This study draws a link between this coordinating role and the development of social value.

Programme works effectively in partnership. This finding has been consistent over the five years that stakeholder views have been gathered. Stakeholders highlight the Inspire Education Programme's collaborative culture and drive, with the connecting role highly valued.

Independent Evaluation Recommendations

The evaluator would like to make the following strategic and operational recommendations:

1. Establish a steering group with HS2, Crossrail, and National Grid, and others in the i3P network [55] to connect good practice across major infrastructure education programmes[56]
2. The Inspire Programme is most effective at engaging with young people with some prior interest in STEM.[57] To create the most added social value for the project going forward, interventions would ideally target young people with some STEM interest living in lower super-output areas of the county, with low STEM capital.
3. Re-consider an earlier evaluation recommendation to develop YouTube videos for parents, which parents could access directly, or through schools at parents' evenings. We recommend that Inspire 'ambassadors' in the HPC workforce are featured.
4. Work with the STEM National Learning Centre to develop sustainable CPD solutions for the teachers in Somerset aligned to the labour market opportunities in STEM in the South West region.
5. Commission placed-centred evaluation in the West Somerset Opportunity Area, over a 3-year period, with schools engaging with the Inspire Programme compared to those that do not. The study could connect with other STEM employers to assess the programme's contribution to the wider labour market

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Research Recommendation

6. Commission placed-centred evaluation in the West Somerset Opportunity Area, over a 3 year period, with schools engaging with the Inspire compared to those that do not. The study could connect with other STEM employers to assess the programme's contribution to the wider labour market.

[55] https://www.i3p.org.uk/

[56] A rapid evidence search of the published education strategies from these infrastructure project did not discover any published independent evaluation results

[57] As a guide, this would between 58% and 80% of young people, based on 495 young people.

Feedback

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