

# Key Stage 3 Digital Engagement Pilot

## Evaluation

<b>Executive Summary .....</b>	<b>2</b>
<b>1. Introduction .....</b>	<b>5</b>
<b>2. Final Pilot Design .....</b>	<b>8</b>
<b>3. Survey Findings.....</b>	<b>13</b>
<b>4. Activity Evaluation.....</b>	<b>20</b>
<b>5. Barriers to school and student engagement in digital skills development .....</b>	<b>27</b>
<b>6. Conclusion and Observations .....</b>	<b>30</b>
<b>Appendix: Pilot Design and Development .....</b>	<b>34</b>

## Executive Summary

The talent pipeline for digital specialists is neither big enough nor wide and diverse enough. Too few young people are choosing to pursue computing studies and digital careers. The need to intervene and stimulate interest in computing studies and digital careers should be pervasive throughout education, yet isn't. This pilot tested cross-curricular digital skills and careers activity with pupils in Years 7 & 8 (pre-GCSE option selection) to explore whether exposure to a wide range of digital careers and extra-curricular digital activities would encourage more pupils to consider choosing a digital vocational option or GCSE Computer Science.

The pilot was delivered in the Heart of the South West LEP region which covers Devon, Somerset, Plymouth and Torbay. In contrast to other LEP and MCA regions such as the West of England, West Midlands and Greater London this is not an area associated with tech and digital careers; thus the opportunity to raise the profile of digital careers has a greater need.

Throughout, the pilot was overseen by a supportive and committed Steering Group and it is important to recognise the contribution of multiple organisations that positively influenced the initial concept and direction. The pilot presented gender neutral digital roles in order to address the current imbalance in the number of female pupils that choose a digital vocational option or GCSE Computer Science.

The pilot benefitted from a counterfactual group of schools and pupils from beyond the Heart of the South West LEP region and this has enabled a useful point of comparison in reflecting upon the overall impact of the pilot.

The pilot was also delivered within the uniquely challenging context of Covid. This had a significant impact, as detailed throughout this evaluation. For example, whilst the aim was to improve quality digital encounters in up to 15 secondary schools across the region the impact of Covid meant that by the close of the pilot 9 schools had sustained their engagement.

Despite these challenges, the pilot has demonstrated that it is possible to raise awareness of digital skills and careers and stimulate positive engagement in some very concrete, clear and sharp ways. The challenge of Covid pushed the partnership to develop and then hone interventions and support mechanisms for schools that were focussed, scalable, flexible, specific, relatively easy to use and join in on, and cost-effective. Because of this, we believe the interventions have a robustness that will allow them to be successful anywhere and anytime.

However, the short term, small scale and time-limited nature of its delivery has meant that it was not possible to measure whether the positive engagement then translates into increased uptake of 'digitally- focused' GCSEs such as Computer Science down the line. It did not seem to and the reason for this will need to be investigated.

There are a number of conclusions and observations from the pilot (more information on these can be found chapter 7). These include:

### For Policymakers & Schools

- There is a central place for digital skills across all curriculum areas and as a vital skill for the workforce of the future. With that in mind, the full and visible backing of the Department for Education would really aid the widening of programme uptake by schools in any future iteration.
- Be clear about what it means to be an effective digitally engaged school.
- Be clear where digital sits within the curriculum - whilst digital may relate specifically to certain subjects in depth, it also sits across the curriculum in much the same way as literacy and numeracy.
- Engagement and delivery need proactive driving. Simply making material accessible is not enough.
- Working in partnership is essential - active support of the Local Enterprise Partnership and the Careers Hub needs to be integral.
- Find ways to address or surmount barriers - time, capacity, competing priorities, limited IT resources need to be addressed to help ensure the delivery of effective interventions.

### For Content Designers

- Keep it simple - accessibility and flexibility of content and delivery allow schools the choice about when and where to use it, whether in specific subjects or in cross-curricular spaces.
- Provide a local flavour - this raises the profile of local digital companies and opportunities and promotes idea that young people don't have to leave to pursue a digital career.
- Highlight a breadth of sectors - cross-sector content offers a wider view of what digital can be and mean from a work and employment perspective.

### For Individuals & Businesses

- Teachers – all teachers should be supported to explore and understand the contribution to digital that their subject offers.
- Parents - recognise the importance of digital skills for their children's futures but need better access to information about jobs and careers to help support their children in making choices.
- Businesses - there is considerable scope to build on industry's enthusiasm and willingness to help improve awareness of digital careers and routes into them.

With thanks to:

Participating Schools

ACE Schools, Plymouth  
All Saints Academy, Plymouth  
Cullompton Community College, Devon  
Great Torrington School, Devon  
Holsworthy Community College, Devon  
Huish Episcopi Academy, Langport, Somerset  
Isca Academy, Exeter  
Lampard Community School, Barnstaple, Devon  
Mount Tamar School, Plymouth  
Paignton Academy, Torbay  
Tavistock College, Devon  
Tor Bridge High, Plymouth  
The Castle School, Taunton, Somerset  
West Exe School, Exeter, Devon

Counterfactual Schools

City Academy, Bristol  
Fowey River Academy, Cornwall  
Liskeard School & Community College, Cornwall  
Mangotsfield School, Bristol

Participating Businesses

Babcock International, Plymouth  
BluescreenIT, Plymouth  
BT/EE  
Fab Lab, Plymouth  
Fishtek Marine, Dartington, Devon  
4Pi Productions, Cardiff  
Lineal Software Solutions, Barnstaple, Devon  
Ocean City Media, Plymouth  
Skindog Surfboards, Newquay, Cornwall  
Somerset Film, Bridgewater Somerset

## 1. Introduction

This document provides an evaluation of the KS3 Digital Engagement pilot commissioned by the Heart of the South West Digital Skills Partnership, funded by the Department for Digital, Culture, Media and Sport, and delivered by Real Ideas. It covers the context of the commission, the background to the pilot, and its design and delivery. It describes the evaluation undertaken as part of the pilot, the findings and lessons and, from these, conclusions and observations.

### 1.1 Background

In 2020 the national Digital Skills Partnership Schools Group<sup>1</sup> identified that “the talent pipeline for digital specialists is neither big enough nor diverse enough. Too few young people are choosing to pursue computing studies and digital careers. Unless the UK is able to grow the number of students pursuing a digital career or taking computer science at GCSE and A level (in 2018 the number of students taking Geography or History at GCSE was roughly 4 times the figure of those choosing Computer Science) the UK will never close its significant digital skills gap. A lack of digital skills contributes to low productivity and limits the ability to grasp economic opportunities particularly from the developments and application of new technologies.”

Consequently, the schools group set out to deliver a pilot in the Heart of the South West LEP region, in conjunction with the LEP’s local Digital Skills Partnership and the LEP’s Careers Hub. The pilot’s business case was approved by the Department for Digital, Culture, Media and Sport to deliver the pilot in the academic year 2020/21.

The pilot was intended to:

- Test and measure what type of digital encounters are most effective in supporting careers education to help schools demonstrate the relevance of digital skills, the career opportunities in digital roles, and the routes into them.
- Develop a Proof of Concept to explore how building an effective regional network will develop capability and capacity to improve quality digital encounters in up to 15 secondary schools, reaching 10,000 students across Devon, Somerset, Plymouth and Torbay. Develop an evidenced-based model that can be rolled out to other regions that will have a meaningful impact in encouraging many more students to pursue computing studies and digital careers.

The agreed objectives of the pilot were as follows:

- Establish a regional network of digital stimuli for schools.
- Explore how the Careers and Enterprise Company (CEC) network of Enterprise Coordinators and Enterprise Advisers can provide insight on school and college needs in

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<sup>1</sup> The aim of the DSP Schools Group is to maximise the impact of industry and business support for the teaching of computing in schools. This group is co-chaired by Sarah Foxall (Microsoft) and Julia Adamson (BCS). It has a wide industry membership and others including DfE, DCMS and the Careers and Enterprise Company. The working group is the main way that the National Centre for Computing Education engages with industry partners. The Centre was launched with £84m government funding to deliver training and support to computing teachers for schools and colleges in England.

the area. Improve schools' career provision by aligning with the Gatsby Benchmarks, especially BM4 (Linking Curriculum Learning to Careers) to embed a cross curricular approach, and BM5 (Encounters with Employers and Employees) to provide meaningful encounters with the digital sector.

- Explore how those needs can be mapped to support offered by the private sector and STEM supporters.
- Inform local, regional and national employers to drive engagement, investment and support for key activities.
- To explore use of the CyberFirst programme and other similar programmes to address those needs where appropriate.
- Increase pupils' understanding of the wide range and varied well paid digital careers available.
- Increasing schools' awareness of the importance of digital skills for all pupils.
- Increasing the volume of extracurricular digital and technology provision through clubs, competitions, events and engagement with tech organisations.
- As a long-term goal the pilot's legacy is to increase the number of pupils taking GCSE Computer Science and IT User Skills or iMedia at Level 2.
- Deliver an impact assessment.
- Deliver a playbook that will be used to support other local DSPs to support the development of effective practice in digital skills career opportunities.

## 1.2 Method and approach to evaluation

The pilot as originally designed was relatively small and short in scope and, as with some other small pilots, for reasons of cost effectiveness and value for money, it was agreed that a separate entity in the project delivery organisation would assess the impact of the pilot. An evaluation framework was therefore designed by Real Ideas to sit alongside and underpin delivery of the pilot with the following broad overall approach:

- Real world focused and engaged. Grounding out the high level aims and ambitions in real schools. Aiming to surface what all this looked and felt like from the perspective of students, teachers and schools, so that practice and policy could be best structured, textured, shaped and informed by the dominant patterns of lived reality.
- Formative. Ensuring that learning occurred as the pilot progressed – from what worked and didn't work; from the direct and indirect learning that arose from the pilot - and so that this learning from the pilot was used to improve quality of delivery and outcome as it was delivered, in a structured and iterative manner.
- Counterfactual. A number of schools from beyond the pilot area were recruited to provide counterfactual data to help assess the impact of pilot activity.

As outlined in the appendix, the pilot went through a number of design iterations as a consequence of the ongoing impact of Covid, changing restrictions and the consequent capacity of schools to participate. This impacted on the pilot itself and also on the scope and manner of possible evaluation, which had to be simplified in order to be conducted remotely and avoid adding undue pressure on schools. This resulted in two main tools being used: online surveys at the start and end of the pilot; and semi-structured interviews with school pilot leads. Alongside

this, 4 schools from beyond the pilot area were recruited to act as a counterfactual study and also completed the online surveys. However, whilst the range of evaluation tools was reduced, the overall approach was maintained and generated rich and useful material than can inform future policy and practice, including ideas for further study and research.

## 2. Final Pilot Design

### 2.1 Overview

As outlined in the appendix, the design of the pilot underwent a number of revisions as a consequence of the turbulent impact of Covid, lockdown and the revised timescale and requirements for delivery and evaluation. However, the two main design features remained consistent:

- A pre-programmed online programme for all participating schools that could be accessed whether or not we were still in lockdown, providing content that could be accessed and used in as flexible a way as possible.
- Focused primarily on engagement activity for students rather than support for staff.

Whilst the pilot was designed with a Key Stage 3 focus, the spotlight was on Y7 – Y8 students and, where possible and for obvious reasons, those who were at the pre-option stage. Depending on school capacity, activities could be delivered across both year groups or just one. What was important was that the activities were not restricted to those young people who were interested in ‘digital’ but were offered to as wide a range as possible – in order to try to switch students on, change perspectives and create new connections.

Additionally, in recognition of the on-going extreme pressures on teaching staff, there was a desire to make everything as light touch and as simple as possible to engage with. To facilitate this, the decision was taken to create a bespoke pilot website landing page which would act as a dedicated one-stop shop for all the information and content schools needed to make the most of their participation.

The final pilot structure focused on four strands of activity and schools were encouraged to self-select those strands they wished to engage with and with which cohort of students and this was completed via an electronic sign-up form via the Real Ideas CRM.

The strands of activity were:

- 1. Virtual Digital Engagement Series** – a series of regular sector insights designed to improve access to and interest in the range of digital and tech careers available across the region:
  - Amazing Makers – using tech to make
  - Code Crackers – cyber security
  - Super Software - coding
  - Dazzling Designers – creative design
  - Future Tech – engineering new tech
  - Digital Natives - focused on what digital skills are, why important, and their applicability across a broad spectrum of careers



Each insight was released fortnightly (and then available retrospectively on the webpage for re-use). Schools were able to choose how to access these and engage their students with them depending on circumstance.

Each was made up of 4 elements:

- Insight mini ‘infomercial’
- Workplace Tour
- Employee profile (focused on a ‘one-step removed’ employee)
- Activities/challenges

Each video was designed to be no more than 3-5 minutes long. Schools had flexibility in their use but were asked not to deliver them in ‘tech/computing’ lessons, thereby not restricting the potential audience and seeking to encourage a broader platform for and engagement with digital. It was suggested that they could be delivered as: a week of tutor time activity; at various points across a day; all in one go; or as part of PSHE. They could then also be accessed individually by students out of school time.

A fifth element was:

- An employer/employee Q&A

This was designed to be live and the participant notified to schools in advance so that students could submit questions beforehand.

2. **Digital Badges** – credentials that symbolise learning achievements and used widely in the corporate and tech worlds. They can be used to support young people to gather, reflect on and articulate real-world evidence of their skills and build better futures for themselves. They are a powerful and positive way to re-think qualifications, especially in the space of careers and employability education, but they are also valuable in recognising other forms of informal learning, such as that which occurs in extra-curricular activity.

Participating schools gained access to Badge Nation membership and could issue specially designed Digital Engagement badges to students for the completion of each of the sector insights if they wished. They could also go on to create their own digital badges.

3. **Real Ideas Digital Futures Newsletter**

Schools received a fortnightly newsletter highlighting the Real Ideas programme of ongoing activity (including talks, seminars, holiday events) as well as links to regional/national events and competitions.

Participation in any of the activity was completely voluntary but the key requirement of the pilot was for schools to share the information and opportunities with staff, students and parents – therefore building a bigger potential audience and network for digital engagement (and also increasing reach and value for money for the material produced).

#### 4. Digital Futures Summit

A blended (both virtual and in person) event hosted from the Market Hall in July. At the point of launch this event was still in the planning stages and highly dependent on the progress of the pandemic, but the hope was to provide opportunities for students from participating schools to visit and enjoy an immersive event and workshops as well as access live online content.

## 2.2 Call out to sector

A key feature of the pilot was the need for digital sector engagement. A call out document was used by stakeholders to engage relevant organisations.

## 2.3 Counterfactual aspect to this evaluation and assessment

Real Ideas encountered some difficulty in securing the necessary number of counterfactual schools by the Easter deadline. To generate the required counterfactual data, the Project Group suggested building an element into the evaluation process with the participating schools that collected counterfactual data from non-participating staff and students (for example, where the focus is on Y8 then counterfactual work could be undertaken with Y7s), thus giving a wider pool to draw on. In addition, the Careers Hub would liaise with SLT at participating MAT schools to identify other secondary schools in the same MAT to act as part of the control group.

As a consequence, participating schools were asked to carry out the initial surveys with all Y7 and Y8 students (and staff and parents) regardless of who they were focusing the pilot on. This way it would be possible to match the counterfactual groups later, once schools had confirmed their year group participants.

It was also decided to continue to pursue a number of counterfactual schools, using potential Market Hall Dome visits and free sign up to digital badge membership as an incentive, with these schools completing the baseline evaluations slightly out of step with the pilot schools.

In the event, 4 counterfactual schools were secured by Real Ideas who approached a number of schools outside the HOTSW region in Cornwall and Bristol who they already held a relationship with through other work – supplementing the counterfactual data generated from non-participants in the other schools taking part in the pilot.

Following initial approaches by the Careers Hub Enterprise Coordinators all interested schools had an online meeting with the Project Lead who explained the details of the pilot and also provided an expanded details document. Following sign up they each received a welcome email in the week prior to the launch on 19 April (the start of the summer term) with the link to the pilot webpage which contained all of the details they needed for participation.

The welcome email and the webpage provided step by step information for schools to engage with the programme:

- Complete Data Sharing Agreement
- Arrange for completion of baseline surveys

- Read Badge Nation explainer - sign up and book to attend Badge Writing workshop
- Access first Virtual Digital Engagement Series content

At the pilot start, 14 schools had signed up to participate. By the close of the pilot, 9 schools had sustained their engagement. For those that were unable to sustain engagement the reasons included Covid, staff capacity and changes in staff.

## 2.4 Survey Design

**Baseline Survey (April)** There were 3 baseline surveys completed at the start of the pilot delivery by both the participating and counterfactual schools:

- Student
- Staff
- Parents

Surveys were designed and completed via Typeform with the links to each available on the pilot webpage. Schools were asked to disseminate these within their settings.

Baseline Survey Responses:

- Pilot Schools Students: 1357
- Counterfactual Schools Students: 499
- Pilot Schools Staff: 7
- Counterfactual Schools Staff: 51
- Pilot Schools Parents: 28
- Counterfactual Schools Parents: 68

**Survey 2 (July)** Mirroring the baseline surveys there were 3 surveys completed at the end of the pilot delivery by both the participating and counterfactual schools:

- Student
- Staff
- Parents

Surveys were designed and completed via Typeform with the links sent directly to school leads in late June to be completed by the end of the summer term on 23 July. Schools were asked to disseminate these within their settings.

Survey 2 Responses:

- Pilot Schools Students: 233
- Counterfactual Schools Students: 269
- Pilot Schools Staff: 1
- Counterfactual Schools Staff: 15
- Pilot Schools Parents: 0
- Counterfactual Schools Parents: 61

The number of responses across all surveys were significantly reduced when compared with the baseline largely as a result of increasing Covid pressures in schools towards the end of the summer term. There is also often a tendency towards survey fatigue across the lifetime of a pilot anyway – with this exacerbated by the pandemic.

### 3. Survey Findings

The evaluation of the findings below focuses on student responses. Staff and parent responses are utilised as points of expansion and comparison.

Survey responses were ranked on a 1-5 scale where 1 = low and 5 = high and the following percentages account for combined 3-5 responses.

Findings outline responses across time and between both Pilot and Counterfactual schools.

Parent and staff results discussed are for the April Baseline survey only as a consequence of the very low returns in the July survey, especially from pilot schools.

#### How much do you know about digital skills?

	April	July	Change
Pilot	54%	63.3%	+9.3
<i>Counterfactual</i>	<i>60.1%</i>	<i>63.5%</i>	<i>+3.4</i>

Starting from a lower base, with just over half of students positively responding about their knowledge of digital skills, pilot school students show a 9.3 percentage point increase across the life of the pilot whilst the counterfactual school student responses, although initially higher, show less change, suggesting a positive impact of the pilot activity.

It is interesting that the counterfactual data shows a positive change too, though much lower than the pilot school student data. It could be that the significant volume of online life and learning carried out during this phase of Covid has had a background effect on digital skill awareness and engagement for many students – though it would require further study to shed light on this conjecture.

For parents the 3-5 percentage score was 64.3% (Pilot) and 64.7% (Counterfactual).

For staff the score was 100% (Pilot) and 75.5% (Counterfactual).

The higher scores from both parents and staff indicate an evident adult understanding of the importance of digital skills when compared to students so it is interesting to consider why the scores are lower for students if the adults they are in contact with are more knowledgeable or aware. Again, this could be a useful line of further inquiry.

The higher scores for staff (in particular in the pilot schools) is accounted for by examining the roles of those responding, which indicates a preponderance of those with specialisms in digital/IT/computing.

**To what extent do teachers teach digital skills in your lessons?**

	April	July	Change
Pilot	65.9%	75.2%	+9.3
<i>Counterfactual</i>	<i>66.1%</i>	<i>65.8%</i>	<i>-0.3</i>

It is evident that teachers do teach digital skills in a range of lessons although the survey did not ask in which particular lesson this occurs as it was necessarily high level. What is evident from the responses is that in the pilot schools there was a positive change linked to the strands of activity that students had access to, however delivered.

It is also interesting to consider the observation that the scores here are higher than for those that students give for ‘how much they know about digital skills’. Despite there being a higher recognition that digital skills are taught, students’ knowledge about them is less secure and it would be interesting to pursue the disconnect between the two.

Staff were asked ‘to what extent do you teach digital skills in your lessons/promote in your role?’ and responses were 71.5% (Pilot) and 59.5% (Counterfactual).

These results can be accounted for by looking at the roles of the respondents. In the pilot schools these were all Computing/Science/Careers related and therefore those with a remit linked more directly to digital, who consequently built upon this positively during the pilot. For the Counterfactual schools there was a much wider representation of roles, including teaching assistants, administration staff and subjects including English, Drama and PE.

Asked ‘to what extent you talk to your child about digital skills?’ parent responses were 70.3% (Pilot) and 61.7% (Counterfactual).

**How much do you know about digital jobs and careers?**

	April	July	Change
Pilot	50.3%	63.3%	+13
<i>Counterfactual</i>	<i>52.3%</i>	<i>52.5%</i>	<i>+0.2</i>

The responses here indicate a strong positive change across the life of the pilot for students in the pilot schools who had access to the strands of activity and, in particular, the Virtual Digital Engagement Series that was designed to focus particularly on sector workplaces, employers and employees. As outlined below, this strand was the one most positively received by staff who also outlined the positive engagement of students.

When looking at the April baseline responses from parents the positive 3-5 percentages were less than 50% for both pilot (48.1%) and counterfactual (39.7%), whilst for staff the percentages were 85.7% (pilot) and 49% (counterfactual) with, again, the pilot school response skewed by the specialisms of the staff responding.

These responses suggest the need to promote and raise awareness of digital jobs and careers generally but also, importantly, amongst adults who would then be able to disseminate that knowledge to young people.

**To what extent do teachers promote digital careers in your lessons?**

	April	July	Change
Pilot	46.7%	62.8%	+16.1
<i>Counterfactual</i>	45.6%	44.1%	-1.5

Bearing in mind the adult responses in the previous question above it is no surprise that, overall, the baseline figures here are lowest across the survey questions. If adults do not feel knowledgeable about digital jobs and careers then they are unlikely to confidently promote them. Whilst the pilot school staff response to the previous question was high as a result of subject specialisms, this question asks about ‘teachers’ and ‘lessons’ so it is reasonable to posit the view that overall this specialist knowledge is generally siloed and diluted across students’ school experience. Thus, an area of fruitful further study would be in examining in which lessons the promotion of digital careers sits in schools and how this could all be best amplified and integrated more generally.

For school staff the scores were 71.5% (pilot) and 34.1% (counterfactual) and for parents, who were asked ‘to what extent do you talk to your child about digital jobs and careers?’, 42.9 (pilot) and 30.9 (counterfactual).

**To what extent do you feel your school is digitally engaged?**

	April	July	Change
Pilot	72.5%	81.4%	+8.9
<i>Counterfactual</i>	68.6%	64.6%	-4

The change in response in pilot schools across the life of the pilot (compared to the counterfactual schools) suggests that delivery of the activities positively impacted on the extent to which students felt their school was digitally engaged.

For staff the figures were 85.8% (pilot) and 74% (counterfactual).

However, the scores for parents (92.8% pilot; 91% counterfactual) suggest a difference in perception between them and those actually in schools, with the scores reducing the closer we come to the core recipient (the students).

One possible reason for this is the extent to which digital engagement is linked to the availability and quality of equipment/hardware. When asked the question ‘What would make digital better in your school?’ students offered a wide range of responses, although there was a relatively high



level of recurrence for phrases containing the words ‘more’ and ‘better’ in relation to access and equipment, such as computers, Chromebooks and wifi. In contrast, parent responses were lower:

	Students				Parents	
	Pilot April	CF April	Pilot July	CF July	Pilot April	CF April
<b>More</b>	27%	20%	39%	23%	14%	10%
<b>Better</b>	5%	6%	2%	4%	5%	2%

When staff were asked the related question ‘What barriers do you feel exist in relation to digital engagement your school?’ responses from pilot schools related to access/accessibility whilst for counterfactual schools they related to a lack of equipment or the issue of cost.

It would be interesting to explore this further, particularly with regard to how respondents defined ‘digital engagement’.

### **How important do you feel digital skills, knowledge and ability are for your future?**

	April	July	Change
Pilot	75.7%	81%	+5.3
<i>Counterfactual</i>	73.1	70.8%	-2.3

Even at the April baseline stage this question received the highest percentage score from students in both the pilot and counterfactual schools. Clearly, regardless of their exposure to digital skills knowledge (and also understanding of digital jobs and careers in school) students feel they are important for their futures. Indeed, the strength of responses here is also strongly indicative of this. Whilst across all survey questions the ‘5’ responses are less than 10%, here those responses are 15.3% (pilot) and 16.6% (counterfactual) in April and 23.9% (pilot) and 20.8% (counterfactual) in July.

For parents the scores were 96.4% (pilot) and 98.5 (counterfactual) and for staff 100% (pilot) and 97.9 (counterfactual) with no responses at ‘1’ for either cohort.

Clearly there is a strong consensus about the importance of digital skills, knowledge and ability that is ready to be built upon in developing digital engagement strategies going forwards.

### **How likely are you to choose GCSEs with a digital element?**

	April	July	Change
Pilot	51.6%	46.9%	-4.7
<i>Counterfactual</i>	46.1%	47.9%	+1.8



Despite the evident importance students afford digital skills, knowledge and ability for their futures there is a no explicit correlation here with its impact on their GCSE choices. The inability, because of Covid constraints, to conduct face-to-face interviews with students means it has not been possible to explore this disconnect further and it would be an interesting area of future study.

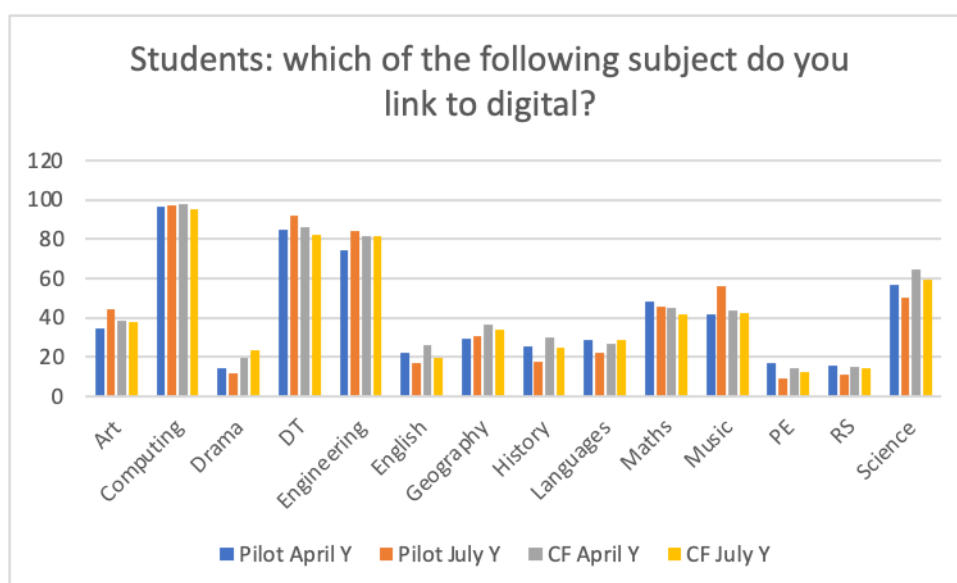
The anomaly here is the change in the scores between April and July which run against what would have been expected in terms of the impact of the pilot activity. There are a number of possible explanations. First, it cannot be guaranteed that exactly the same students completed the surveys across all participating schools owing to the impact of Covid on school activity in July; second, in terms of the pilot schools, it may be that the activities they engaged with, including the employee Q&As that were part of the Virtual Digital Engagement Series, evolved a narrative across their delivery that digital skills were generic rather than subject specific. Certainly, many of the employee participants in this content discussed the place and importance of digital skills across their experiences and often hadn't pursued specific 'digital' subjects at school with this having little detriment to their employment in roles in 'digital' sectors. Thirdly, the availability of subjects with a digital element within school option structures may mitigate against making a choice of them.

When asked 'how likely are you to encourage your child to take GCSE subjects with a digital element, parents responded 92.9% (pilot) and 89.5% (counterfactual) so there is an evident disconnect between parents' positivity in this regard and students' intentions.

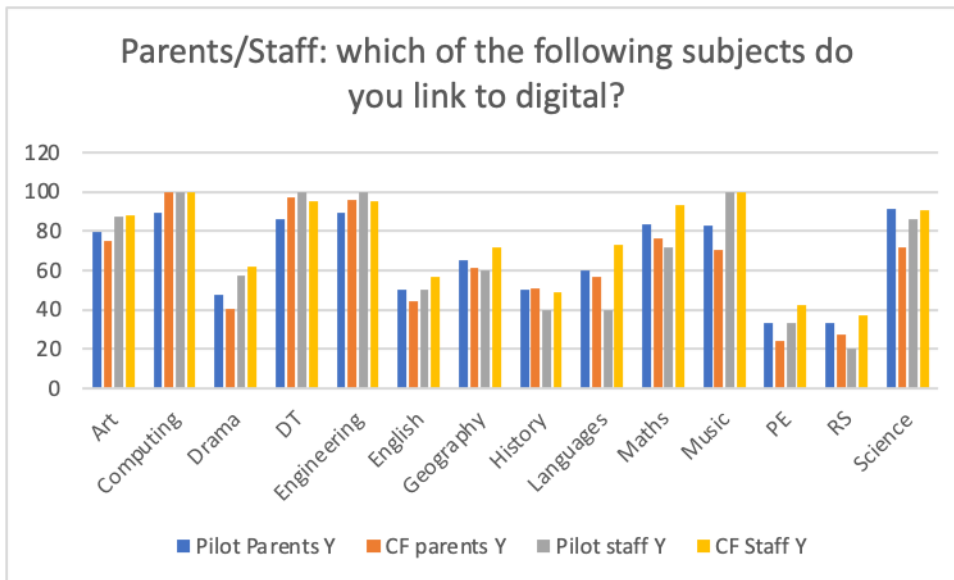
**Which of the following subjects do you link to digital?**

Surveys included a question that provided a list of 14 subjects and asked participants to state yes or no in response to this question.

The only subjects with 70%+ scores from students in both pilot and counterfactual schools were Computing, DT and Engineering. This remained the same in pilot schools after the pilot.



Interestingly, both parents and teachers identified a broader range of subjects as linking to digital, adding Maths, Music and Science; staff in both cohorts also added Art. It was also the case that the relative percentage scores for all subjects were higher from parents and staff than those given by students.



It seems adults hold a wider and stronger view of which subjects link to digital but that this is not shared with student who have a narrower perception of subjects that link.

**When you are doing digital what are you doing?**

This question, expressed as simply as possible, was designed to gather a sense of what activities respondents linked to digital. Across all surveys there were a wide range of responses although analysis indicated particular patterns of recurring words and phrases.

	Students				Parents		Staff	
	Pilot Apr	CF Apr	Pilot July	CF July	Pilot Apr	CF Apr	Pilot Apr	CF Apr
<b>Online/Internet</b>	17%	12%	23%	12%	19%	18%	14%	19%
<b>Computer/Computing</b>	17%	12%	16%	12%	30%	16%	0%	17%
<b>Play/Playing</b>	16%	12%	12%	13%	0%	9%	0%	0%
<b>Work/Working</b>	11%	9%	20%	5%	15%	7%	14%	21%
<b>Device</b>	9%	12%	10%	11%	7%	15%	14%	10%
<b>Using</b>	9%	9%	5%	9%	0%	6%	29%	21%
<b>Games/Gaming</b>	8%	8%	19%	10%	4%	1%	0%	0%
<b>Phone</b>	8%	7%	7%	7%	19%	9%	0%	4%
<b>Youtube</b>	1%	1%	1%	1%	0%	1%	0%	0%
<b>Learning</b>	0.01%	2%	2%	1%	0%	1%	0%	6%

For all respondents, there were strong scores for phrases related to ‘online/internet’ and using a ‘computer/computing’. These, alongside the recurrence of phrases linked to ‘using’ technology or being on a ‘device’ suggest that for many respondents ‘doing digital’ is about an interaction with a device or system rather than being related to a skill or attribute.

Comparing the responses of students to adults it is interesting to note the differences in scores for ‘play/playing’ and ‘games/gaming’. Students’ responses using these terms were stronger than for adults, offering an interesting point for consideration in terms of the extent to which, for young people, digital is tied to entertainment and leisure time. In light of this it might have been expected that the recurrence of phrases linked to ‘work/working’ might have seen the reverse. However, both student and adults scores seem broadly in agreement.

## 4. Activity Evaluation

The evaluation of the 4 strands of activity was accomplished through the 3 methods outlined below as well as through regular feedback from school staff throughout the pilot and via participation data:

### 1. Midway Evaluation Meetings

These semi-structured interviews were held virtually via Microsoft Teams with school project leads in June. 9 project leads took part.

### 2. Student Evaluation Meetings

As a consequence of Covid, planned formative evaluation activity with students was unable to take place in a direct way, both because of the constraints upon visitors into schools and because of schools' capacity to arrange additional online group sessions for participants, over and above any regular online learning/activity, especially in light of the increasing Covid impact upon them towards the end of the pilot. The main tools for student feedback therefore are the online surveys. Additionally, to address this potential gap, feedback regarding student engagement was sought from school staff in the midterm evaluation meetings – and this proved valuable.

### 3. Pilot Administrator Meeting

A semi-structured interview was held virtually at the conclusion of the pilot delivery with the Real Ideas Programme Coordinator who had taken responsibility for administration and account management.

## 4.1 Virtual Digital Engagement Series

Schools were able to choose when and how to deliver this stand of activity. Consequently a range of approaches were used, including through tutorial time, although content was predominantly delivered during Science/IT/Computing lesson time.

### Views

Access to the video content was restricted to participating schools and the delivery team. It was provided via a link on the Pilot webpage that directed participants to an unlisted page on Real Ideas' YouTube channel.

Title	Date	Tour	Profile	Infomercial	Q&A	Total
Dazzling Designers	19 April	112	63	61	25	261
Super Software	4 May	26	64	40	14	144
Amazing Makers	17 May	32	43	32	10	117
Code Crackers	7 June	72	148	49	23	292
Digital Natives	21 June	12	37	37	8	94
Future Tech	5 July	8	33	10	8	59
<b>Total</b>		262	388	229	88	

There was a good deal of consistency in the number of views across the main recorded content (Tour, Profile, Infomercial) although the employee profiles accrued the greater number of views,

perhaps because of the decision taken to focus on ‘one step removed’ young employees who would feel more relevant and resonant for KS3 students.

However, it is noticeable that there was an overall reduction in views across the delivery of the pilot, especially as delivery moved into the end of June and July when, as outlined elsewhere, Covid began, once more, to have a significant impact on school life and capacity. This said, the videos have continued to be viewed beyond the pilot period, with Dazzling Designers, Code Crackers and Super Software all having views into October and November 2021.

Interestingly, the most digitally typical (Code Crackers, focused on Plymouth-based BluescreenIT and their work in cyber security) and digitally atypical (Dazzling Designers, focused on surfboard manufacturer Skindog Surfboards) were the most-viewed sector content.

The Q&As had a lower number of views. These were originally planned to be viewed live after students had engaged with the other content, leaving them time to prepare questions for the employees they had seen in that content and thus engender a more direct level of engagement. Unfortunately, the variety of ways in which individual schools used the video content and the constraints of timetables meant that no schools were able to watch the Q&As live. Even in normal times, schools tend to operate different hours, timetables, structures etc, making it almost impossible to schedule live content for them at scale across a number of settings at any one time.

Overall, this strand of activity was the most successful as judged by feedback from participating teachers:

*‘I asked my class if they were enjoying it and felt they had learned something new and they all said they had.’*

- Computing Teacher

*‘My Y8 have started the digital project from sessions one and have thoroughly enjoyed each session. They really find the videos useful and informative.’*

- Y8 Tutor

## Observations

The short, sharp style used for this series together with a range of possible follow-on activities provided ultimate flex for teachers.

*‘I like the style of the videos – short and engaging both in terms of format and content. They’re a good opportunity to flag up different aspects of digital to students and ask, ‘would you have put this as a possibility?’*

- Careers Lead

*‘The resources are ones staff feel they can dip in and out of to enhance their digital literacy lessons. The fortnightly video content supplements their lessons. The format supported buy*

*in from staff because they can pick and choose. They don't need off the shelf schemes as they are already experienced. What they appreciate is material to enhance their delivery.'*

- Assistant Principal

*'Videos generally give a good, quick insight as to the types of jobs out there and opportunities in the south-west. Range of activities to pick from are good and there is always something engaging and fun for pupils to do.'*

- Y8 Tutor/Head of PE

*'Kids have been engaged and have asked lots of questions about careers and not knowing about different jobs – the videos have opened their eyes. The diversity of skills needed in different jobs and roles – a lot more questions asked – more than usual from younger year groups.'*

- STEM Coordinator

Staff could choose how and when to deliver to suit.

*'Flexible structure has worked – been able to pick and choose. Can drop it in as and when. To deliver a set scheme of work wouldn't be helpful.'*

- Technology Curriculum Lead

*'Done with Y7 and Y8. One lesson a fortnight in science lessons focussing on the videos and activities.'*

- STEM Coordinator

*'Level is pitched right for Y7s and 8s. The videos and the tasks work well alongside a bit of chat so works for us that way. But I see how they could be run as a lesson or as a careers morning with a selection of sector insights. I've run them in tutor time in a 15-20 min slot but they could be used at the start of computing lessons or be added to IT, DT, etc.'*

- PRU Teacher

They allowed non-specialists to deliver effectively.

*'Kids have loved it. It's also been delivered by non-specialists who have said the kids have loved it – fun, engaging and makes them think....The PE teacher has really enjoyed it. He has had a go at some of the activities himself and that has built his confidence.'*

- Head of IT

The south-west focus was well-received, demonstrating that digital jobs and careers are available in the region and students don't have to leave to pursue them.

*'Been good to show them they don't have to leave the south-west. When you say Computer Studies they think Mark Zuckerberg and it feels unattainable.'*

- Technology Curriculum Lead

*'Pupils are enjoying the tasks and information they are given – they didn't know there were so many digital career paths, especially in the south-west.'*

- Y8 Tutor/Computing Teacher

*'The students were attentive during the videos and there was a buzz of conversation about the opportunities in the south west which has been good. As a careers lead I get lots of national materials, which are fine and show what's possible, but something more local is good to see.'*

- Careers Lead

*'Videos have promoted local opportunities in digital that are a good complement to all the national online content and promotes idea that students don't have to leave the south-west to pursue such opportunities if they don't want to.'*

- Assistant Principal

They addressed a gap in knowledge particularly apparent in Y7/8 students.

*'They don't have a lot of knowledge of the industry around them so it's been good for them to see what's there and available and, at that age, to see a link between subjects and jobs. A lot of our students don't think about life outside the area so that's been good.'*

- Head of IT

*'They're good for this age range who know what their parents do, that people work in shops, that there are doctors and nurses. But beyond that their idea of a career is quite limited.'*

- Careers Lead

They have a life beyond the pilot and can be built in school curriculum content.

*'We will use them going forwards.'*

- PRU Teacher



*'We can now tailor the resources – put them in when relevant in our scheme. Already worked them into plans for next year.'*

- Director of Creative Technology

*'We would be keen to reuse the resources in future.'*

- STEM Coordinator

*'We want to add the videos into our 12-week cycles so using the content for the Computer Science module and making them think.'*

- Head of IT & Technology

## 4.2 Digital Badges

Digital badge take-up was low as schools had limited capacity to commit to the necessary training and set-up, although their Badge Nation membership is valid for a year and most are keen to trial this in future.

*'Signed up with Head of Y8 who was keen and could see the potential for buy in from students. Nothing apart from initial enthusiasm so far.'*

- Assistant Principal

*'Not had time as they're more complex to sort in terms of admin, etc and require training for teachers – so not a priority.'*

- Careers Lead

Two schools have made progress, one linking badges to recognition of school attributes – Respect, Homework submitted on time, Excellent effort, Excellent progress, Perseverance, Kind & helpful, Extra-curricular contributions.

## 4.3. Real Ideas Digital Futures Newsletter

The newsletter was positively received because it curated useful ideas and links, although some schools struggled to distribute it more widely via their own school systems or found it hard to find the time to target and then distribute to relevant people.

*'Lots in there – comprehensive. Has been shared with staff and also links shared with parents via newsletter.'*

- Assistant Principal



*'Emailed out to staff. Freedom for staff to look and use as they felt it needed.'*

- Head of IT & technology

*'Haven't had time to use it fully – content is good but the issue is making time for it to fit in.'*

- Director of Creative Technologies

*'Have shared content to staff – specific bits to specific staff – tips of the week.'*

- PRU Teacher

## 4.4 Digital Futures Summit

The Summit was originally scheduled for 7 July but postponed because of the extension of Covid restrictions by the government. Although it was outside the pilot period, the date was rescheduled to 15 September as the Steering Group felt it was important to include a face-to-face event as part of the overall programme. It was postponed again as a number of pilot schools notified that they were struggling to be ready to attend because of increased new school year preparations, Covid testing and absences and staggered starts. It eventually took place on 18 October and in light of ongoing Covid concerns and the need to manage density of people the opportunity was reduced to 12 schools, each able to bring 12 students and two staff. Funding was available to each school to support travel and supply. It was attended by a mix of pilot and non-pilot schools (to whom the offer had been extended when it became evident that not all pilot schools would be in a position to attend due to Covid).

8 schools booked to attend with 3 pulling out in the week leading up to the event because of the impact of Covid on school activities and cover (a further 2 had to drop out on the day due to covid incidence).

The 5 attending schools took part in a carousel of activities demonstrating a range of digital sectors, skills and pathways. A number of facilitators (marked \*) had been featured in the Virtual Digital Engagement Series Videos. Each activity was 35 minutes and the carousel was designed so students and teachers gained a flavour of the variety of digital sectors and pathways.

Workshops were facilitated by:

- BT – team task linked to digital solutions to online bullying
- BluescreenIT\* – exploring cyber security
- Plymouth Fab Lab – demonstrating 3D printing
- Ocean City Media\* – approaches to digital filmmaking by the team who had produced the Virtual Digital Engagement Series
- Young Employee Panel Discussion\* – Q&A with 3 digital sector employees who appeared in the Virtual Digital Sector Series

- 4Pi – exploring the immersive dome

A simple summary feedback form was completed by students at the end of the day and in terms of the summary scores against the key questions, the overwhelming majority were very positive:

	Low				High
	1	2	3	4	5
I have found the day interesting			7%	51%	42%
I have found the day informative			16%	30%	54%
I know more about digital skills and opportunities than I did before		2%	9%	42%	47%
How important do you feel digital skills, knowledge and ability are for your future?		4%	16%	40%	40%
How likely are you to choose GCSEs with a digital element?		12%	26%	32%	30%

The students were also asked to highlight what they had enjoyed the most and what they would like to find out more about. All of the workshops were cited amongst the things they enjoyed the most and, equally, amongst the things they'd like to find out more about, suggesting the key aim of raising interest and engagement had been achieved.

Staff commented that it was 'very inspiring for students', 'informative for themselves' and also a good opportunity to 'learn from different organisations'.

*'A fantastic day that was meaningful to all our students. They found the day interesting and were enthused by what they learned'*

- Careers & Employer Engagement Officer, Devon Secondary School

*'What a good day today - the workshops were interesting, informative and varied and the venue was amazing.'*

- Careers & PSHE Lead, Plymouth Secondary School

A number spoke about the links they had made that would be taken back into school and the Careers Hub Lead, who attended the day, also spoke about observing the impact upon teachers of seeing 'real world' applications of digital skills and technology. As she commented, *'More opportunities for teachers to engage with the sector to shape links to the curriculum they are delivering day to day back in school would be really powerful'*.

## 5. Barriers to school and student engagement in digital skills development

Across the delivery of the pilot a number of barriers were raised and recognised, both from feedback from school staff and also from the delivery team. Therefore, follow on or similar work does need to find ways to address or surmount these barriers and challenges in order to be effective.

### 5.1 Time and capacity

*'Time is a premium. Teachers are focused on the curriculum and getting everything done.'*

- Careers Lead

*'Timetabling and time constraints are another issue, more time would give a better outcome for most. Tutor time in the morning is not long enough, especially as they need to be logged in etc, which means it is just the 100 mins once a fortnight and is a little tight for pupils to gain the most benefit.'*

- Y8 Tutor/Computing Teacher

As can be seen from elements of pilot delivery, constraints of time and capacity impacted on the effective use of those features that were not 'instantly' accessible in the ways the videos and lesson resources were. This was particularly the case as Covid continued to impact significantly on society, schools and the pilot rather than, as hoped and expected, ease during the project – making it even more crucial that the interventions the pilot provided could easily be adopted and used, including online and virtually. Where more time was required (to set up digital badges, to organize the dissemination of the newsletter) it was not readily found, especially if it was not a direct help and support to immediate curriculum delivery and pressing educational need.

### 5.2 Competing requests and curriculum priorities

*'There is always an ask from outside – councillor requests, local competitions and competing priorities.'*

- Careers Lead

Schools always face a myriad of competing priorities and calls on their time. These present genuine barriers in effectively implementing activity that is seen as additional to core delivery.

The tendency towards schools delivering the pilot in IT/Computing/Science lessons speaks both to their need to make 'digital' fit and also to pre-conceived notions of what 'digital' is and where it is relevant and should sit/land in a school.

Indeed, looking back at the responses to ‘which of the following subjects do you link to digital?’ the only subjects with 70%+ scores for students in both pilot and counterfactual schools were Computing, DT and Engineering. This remained the same in pilot schools after the pilot delivery.

Interestingly, both parents and teachers identified a broader range of subjects as linking to digital, adding Maths, Music and Science; staff in both cohorts also added Art. It was also the case that the relative percentage scores for all subjects were higher from parents and staff than those given by students.

An interesting angle to pursue in future, therefore, would be delivering relevant activity in subject areas not routinely perceived as being ‘digital’, finding ways to break IT and digital out of the box they tend to fall into simply because of the way that schools and curriculum content tend to be structured and delineated. In turn that may help students better see that IT and digital are both broad-based and underpinning across so many areas of work, life and learning.

Equally, full and visible backing from the Department for Education would help raise the profile within schools and also aid understanding that this does not need to be an ‘add on’ and that it can be used to enhance curriculum delivery already timetabled.

### 5.3 School IT resources

*‘We have followed the brief in the resources where possible but PC access does get in the way.’*

- STEM Coordinator

*‘Some of the latter activities require whole class access to computers – I have not been able to book any.’*

- Y8 Tutor

*‘My Y8 have started the digital project from sessions one and have thoroughly enjoyed each session. They really find the videos useful and informative.’*

*‘For the session on coding, I booked a laptop trolley and within minutes they were hooked and all without fail created great games which they can now use at home. The colours and graphics of their games was truly awesome. Yesterday, they came up with amazing ideas about devices to protect animals and plants. I would recommend you carry on with such projects but ensure that tutors have IT access as it makes it a lot easier then.’*

- Y8 Tutor

It is important not to make assumptions regarding access to computers in schools, especially if engagement is to extend beyond specialist subjects that may have more consistent access to such provision. Booking laptop trolleys or computer rooms impacts on engagement and negates the ease of delivery that was the overriding positive of the Virtual Digital Engagement Series.

The availability of equipment (and its quality) is reinforced by student responses to the survey question ‘what would make digital better in your school?’. Taking the July survey as an example, of the 188 written responses from the pilot schools 73 (39%) contained the word ‘more’ linked variously to more computers, more time, more lessons, more computer lessons, more equipment, using computers more and digital across more subjects. Of the 194 written responses in the counterfactual 53 (27%) contained the word ‘more’.

## 5.4 Clear lines of responsibility

Where and how digital engagement is delivered and whose responsibility it is clearly impacts on the range and level of activity. As outlined previously, participating schools were free to choose how to deliver the pilot activity, with most tending towards delivery in subject areas already connected to digital. Responsibility also rested with a mix of senior leaders, subject heads or careers leads. Consequently, the range of experiences and expectations were varied and it is uncertain the extent to which the pilot impacted beyond those chosen domains.

This would suggest the need for clear whole school digital policies, with responsibility resting at SLT level, that help scope expectations, range and delivery across the curriculum and ensure digital is more widely embedded beyond its obvious ‘boxes’.

## 5.5 Need for sustained personal contact

The issues of time, capacity and competing requests as outlined above made it increasingly apparent to the pilot delivery team that simply providing the webpage, links to resources, and the regular newsletter was not enough to sustain engagement and progress from schools. Consequently, much more regular communication was put in place with regular weekly email reminders sent from one central point of communication in the pilot delivery team as the pilot progressed.

This was also the case during the initial sign-up phase of the pilot where support from school-linked Enterprise Coordinators was crucial in brokering and sustaining the initial contact.

## 5.6 Covid

*‘Covid really has scuppered plans, with Y8 isolating, etc. When we’ve had consistency – linking lessons to real life, contextualising the subject – it’s real – and ties in nicely.’*

- Director of Creative Technologies

Covid had a staggeringly significant impact, as detailed throughout this evaluation, especially in terms of schools finding the time and capacity to maintain participation. However, time and capacity constraints will always be identifiable school barriers to overcome so it has become a clear belief of the pilot delivery team that whatever has stuck and proved effective in delivering outcomes during the pilot in Covid times really does have potential for the future.

## 6. Conclusion and Observations

The place and importance of digital skills is clearly underlined by this pilot, especially as evidenced by the high relevance given to them by students, staff and parents when considering the future of young people. The pilot also demonstrates how crucial it is to continue to develop the understanding and development of digital skills across students, staff and parents, bringing about a greater shared understanding of what digital means, what digital skills are, and the sorts of careers and pathways that are available as a result or, perhaps more significantly, the ways in which digital skills impact upon all careers in much the same way as literacy and numeracy.

The pilot has demonstrated that it is possible to raise awareness of digital skills and careers and stimulate positive engagement in some very concrete, clear and sharp ways. However, the short term, small scale and time-limited nature of its delivery means it is not possible to measure whether that engagement then translates into increased uptake of 'digitally-focused' GCSEs such as Computer Science down the line. Indeed, as outlined, it does not seem that the pilot had much appreciable impact on the intention of students to take such GCSEs. What the pilot cannot answer is the reasons for this, but it would be fruitful to explore in detail the drivers in this space, including schools' options procedures, perceptions of digitally-focused subjects against others, the cross-curricular positioning of digital, and students' wider-aspirations. Plus of course the underpinning psychologies and mechanics of student choice (e.g. when and how choices are really made; factors like university access and value that can shape them; wider government, society and educational narratives that affect them.)

It is testimony to all involved that the pilot has been able to deliver good outcomes (supported by relatively strong counterfactuals) despite the very constant pressure of Covid. Indeed, it is the very strong belief of the delivery team that the elements that have worked during Covid have a robustness that will allow them to be successful anywhere and anytime. This is because they meant the pilot had to arrive at forms of delivery and ways forward that were resilient, flexible, cost effective and accessible at a distance because there really was no other choice.

Key observations as follows:

### 6.1 Policymakers & Schools

*Be clear what it means to be an effective digitally engaged school*

What are the key signifiers of a digitally engaged school? Do they rest with subject content and take-up or do they also reflect careers education, access to equipment, knowledge of staff, employer partnerships formed? What might this mean in real terms for students, staff and parents? Similarly, what specific outcomes are we seeking when undertaking broad-based school support work in this area? The OfSTED 3i framework (intention, implementation, impact) offers help and structure here, if seeking to build on this initial broad-based pilot, and it also provides a common language for schools. What is the specific intention of any work/project/programme/intervention? How can it then best be implemented sharply and effectively? Then how do we check in and ensure it has had the required impact (and what else has emerged along the way that we need to learn from)?



*Be clear where digital sits within the curriculum*

Or, more importantly, that whilst it may of course relate specifically to certain subjects in depth, it also sits across the curriculum in much the same way as literacy and numeracy. For students, parents and staff digital transcends the narrow bounds of subjects such as Computer Science.

*Reflect on whether the key measure of digital engagement is the GCSEs students choose*

That pathway is relatively narrow, constrained by options choices, the nature of the current computing qualifications and uptake numbers and it could be more productive to widen students' understanding of digital skills application across a wide range of subjects.

*Infrastructure matters*

More and better technology needs to be available in schools. Some staff in schools were constrained in their delivery of pilot activity because they weren't in a computer room or couldn't book a laptop trolley (or if they did, set up took too long). Students' most cited responses for what would improve digital in their schools looked to 'more' and 'better'.

*Engagement and delivery needs proactive driving*

Simply making material accessible is not enough. The pressures and constraints on schools and teachers means that it is easy for priorities to shift and focus to drop on anything that is not core activity. Schools' sustained engagement could not be taken for granted and the pilot delivery was in part successful because the delivery team actively 'chivvied' schools to maintain their participation (and even then not all schools did so – though, as outlined, the pressures of Covid on this pilot were unprecedented).

*Working in partnership is essential*

Delivery would not have been successful without the active support of the Local Enterprise Partnership and the Careers Hub. In particular the support of Enterprise Coordinators (and their knowledge of and relationships with schools) was essential throughout. Beyond these immediate networks, access to friendly and open employers was invaluable too – people and organisations like to help young people and talk about what they do in a positive way. The pilot gave them an opportunity, structure and cost-effective mechanism to do so. And in turn that brought new perspectives to students.

## 1.3 Content Designers

*Keep it simple*

In terms of developing an offer, accessibility and flexibility of content and delivery allow schools the choice about when and where to use it, whether in specific subjects or in cross-curricular spaces. It also means teachers can supplement their particular curriculum delivery rather than accommodate a completely new scheme of work.

### *Provide a local flavour*

One of the most welcome elements of the sector videos was the way in which they raised the profile of digital companies and opportunities in the south west and thereby promoted the idea that young people don't have to leave to pursue a digital career.

### *Highlight a breadth of sectors*

The cross-sector content offered a wider view of what digital can be and mean from a work and employment perspective – from a cyber security company to a surfboard manufacturer – and thereby widened the sense of what digital can be for young people too.

## 6.2 Staff

Teachers - teachers should be supported to explore and understand the contribution to digital that their subject offers so that it is not just deployed largely within an IT or computing science box. As outlined, pilot delivery tended to be given over to Computing/Science/IT teachers, thereby reinforcing the narrow perception of where digital sits within schools. There were some instances of delivery by non-specialists (such as a PE teacher) through tutorial time and it would be valuable to deliver a similar programme of digital engagement activity in subject areas not routinely perceived as being 'digital'.

Equally, not all staff are digitally 'savvy' and it could be that staff CPD linked to developing digital skills alongside considering the contribution their subject might offer in promoting digital might be a helpful solution.

Other staff - engaging a range of staff who can share their knowledge and use of digital skills would help young people to see the ways in which everyone needs to be digitally literate to undertake their roles and build productive and interesting working lives.

## 6.3 Parents

Parents recognise the importance of digital skills for their children's futures but need better access to information about jobs and careers to help support their children in making choices. Ways to engage parents and provide access to curated materials that support their understanding without being business promotion material – such as making the pilot video content more widely available – should be explored. More research is also required into the underlying psychology and mechanisms by which choices are made by children and young people in general – then linked specifically to digital and IT pathways and courses.

## 6.4 Businesses

The businesses who contributed to the pilot did so enthusiastically, giving of their time, passion and knowledge. They were able to positively promote their business, support understanding of sector careers and make a contribution to careers education/employability without juggling the demands of workplace visits, talks and work experience which can often take more time and resources than the, generally, one day of filming the pilot participation involved. There appears to



be considerable scope to build on industry's enthusiasm and willingness to help improve awareness of digital careers and routes into them.

## Appendix: Pilot Design and Development

### Proposed Delivery

The pilot underwent a number of revisions between the commissioning brief published on 12 October 2020 and the final delivery phase which commenced on 19 April 2021. A detailed summary of the design phase is provided in Appendix 1.

commissioning brief was published on 12 October 2020 with the following projected timeline:

#### **November 2020 to January 2021**

##### Schools' Onboarding

- Create project promotion pack for schools
- Run benchmark survey on digital engagement in schools academic year 2018/2019, 2019/2020; expected 2020/2021 survey should distinguish between intended activity and the effect of Covid-19.
- Hold schools' engagement - virtual launch event.
- Open the process for schools to apply to be part of the pilot.
- Participating schools recruited through Expression of Interest and schools selected to meet diversity objectives set by Steering Group (SG).
- Expectations agreement and data sharing agreement signed with participating schools.
- Set date for kick-off meetings and rhythm on support with each school for 2021

##### Digital Engagement offer

- Collate the following into a digital portfolio:-
  - Activities
  - List of industry speakers and potential site visits
  - List of national events and programmes

##### Data Evaluation

- Work with the SG to establish a data evaluation framework.

#### **January to July 2021**

- Work with each school to create an individual digital engagement plan.
- Support the implementation of the digital engagement plan; the aim here is to remove as many barriers as possible for the school involved whether through the searching and securing activities, recruiting volunteers to support the activity, arranging the events, promotional material to support engagement from pupils.
- Ongoing evaluation capture.
- Capture and create case study (at pupil, parent and teacher level where appropriate) content from successful interventions.  
Share two mid-term progress report with the National Digital Skills Partnership School Group.

## August to October 2021

- Project Playbook produced.
- Evaluation concluded.

Real Ideas submitted a quotation and, on 16 November 2020, Plymouth City Council, on behalf of the Heart of the SW LEP and its accountable body Devon County Council, appointed Real Ideas to deliver the pilot. Planning was set in motion in line with the projected timeline, including outline plans, evaluation plans and school identification in collaboration with the Careers Hub.

## Developing The Offer

In developing the offer, two groups were established:

- Project Group: Planning, preparation and logistics - Real Ideas Project Lead, HOTSWS DSP Manager, HOTSWS Careers Hub Senior Enterprise Coordinator.
- Steering Group: Strategic oversight - HOTSWS DSP.

## The Original Offer

By 14 December an outline plan had been drafted, with the approach structured to suit and fit with school terms. The aim was to offer a blended approach that would not be over-reliant on in-school activity as this might run counter to ongoing Covid-secure measures in schools.

It was agreed that 15 secondary schools representing a variety of settings from across Somerset, Devon, Torbay and Plymouth would be invited to apply to take part based on recommendations from the Careers Hub team.

In light of the close proximity to the end of the autumn term, it was agreed to use the first Spring half term to prepare for delivery, with the pilot delivery phase running from Spring 2 (Feb) – Summer 2 (July).

A promotional flyer was prepared ready to send to schools on return from the Christmas break team with a deadline of Friday 15 January for sign up. It outlined the offer as follows:

Participating schools will be assigned a Real Ideas consultant who will establish the school-specific barrier to digital engagement at KS3 (with a focus on Y7 & Y8) from the following list:

- Teachers don't make the most of digital in the classroom.
- Students aren't aware of digital skills and why they are important (across sectors) and the potential they offer for higher salaries.
- Computer Science and iMedia are seen as niche subjects lacking wide appeal.
- Access to digital opportunities in careers programme is limited. Students aren't aware of digital and tech careers in a region that is predominantly rural/coastal with intrinsically linked sectors.

Schools will then choose one strand of activity from the following to address that barrier:

**Digital Approaches to Subject Delivery** – a programme of teacher CPD webinars/workshops introducing digital options and activity for non-specialist teachers to enhance classroom delivery.

**Badging Digital Skills** – digital badges are an innovative way to recognise informal learning and skills development. The strand provides access to Badge Nation support to deliver a digital badge programme in your school. Working across one year group and across selected subjects so that students demonstrate relevant skills in a minimum of 3 subjects to achieve a badge. Completion of enough badges results in overall DSP Digital Futures badge.

**Digital Careers Development** - supporting your Careers Lead in developing a KS3 Digital Careers programme, linked to locality and place-based opportunities and delivery of virtual work experience opportunities and workplace tours.

Additionally, all schools will be able to access this universal offer:

**Real Ideas Digital Futures Programme** - Programmed ongoing activity including webinars, virtual Insight sessions, Q&As, employer engagement opportunities and signposting to regional/national events and competitions as well as opportunities to engage with the state-of-the-art Market Hall centre for creative and digital (and its 360-degree immersive dome) due to open in Plymouth in March, and also participate in the Digital Futures Summit in July.

**TIMELINE**

	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
	<i>4 Jan – 12 Feb</i>	<i>22 Feb – 2 Apr</i>	<i>19 Apr – 28 May</i>	<i>7 Jun – 23 July</i>
	<b><i>Preparation Phase</i></b>	<b><i>Delivery 1</i></b>	<b><i>Delivery 2</i></b>	<b><i>Delivery 3</i></b>

**The Revised Offer**

The sudden Covid lockdown and subsequent closure of schools from 5 January ‘until February half-term at least’ had a significant impact on the ability to progress with the original plans as outlined above. It became untenable to approach schools in the 2-week window leading up to 15 January as they were suddenly under severe pressure and juggling all they needed in the preparation to move to remote learning. There was also uncertainty around how long the lockdown would last; significant impact on teachers’ capacity to engage with the pilot in a meaningful way; and the fact that the original plan was designed with schools operating largely as normal. This generated an urgent need to reflect on the reality of how the aims of the pilot could still be best achieved set against this dramatically changing societal backdrop and educational context.

Balanced against this was a belief amongst partners and stakeholders that the return to remote and online learning also offered some valuable opportunities for a pilot that was seeking to develop digital skills capacity and perspectives amongst the school community, as well as potential platforms and structures for delivery and demand for sector support, content and insight delivered virtually.

Consequently, the following revised offer was planned and accepted by the Steering Group on 21<sup>st</sup> January. The delivery phase was still scheduled for Feb – July, with schools signed up by 5 February and a revised flyer was prepared for schools.

## KS3 Digital Engagement Pilot further revision

### Proposal

- A pre-programmed online programme for all participating schools that can be accessed whether or not we are still in lockdown, providing content that they can access as flexibly as possible.
- Focused on engagement activity for students rather than support for staff.
- Delivered between February – July.

### Activity

Each school receives access to the following online digital engagement activities suitable for Y7 & Y8 students:

1. **Virtual Digital Engagement Series** – a series of monthly sector insights designed to improve access to and interest in the range of digital and tech careers available across the region.
  - Amazing Makers – using tech to make.
  - Code Crackers – cyber security.
  - Super Software – coding.
  - Dazzling Designers – creative design.
  - Future Tech – engineering new tech.
  - Digital Natives - focused on what digital skills are, why important, and their applicability across a broad spectrum of careers.

Each insight to be released monthly (and then available retrospectively for re-use) and made up of 5 pieces of content:

1. Insight mini ‘film’
2. Workplace ‘Tour’
3. Employee profile (focused on a ‘one-step removed’ employee)
4. An activity/challenge to be completed.
5. An employer Q&A.

Each piece of content to be no more than 10-15 minutes long. Individual elements can be packaged together so that schools have some flex in how to use them. Could be delivered

as a week of tutor time activity or at various points across a day, or all in one go. The Q&A would need to be notified to schools in advance so students can submit questions.

2. **Digital Badges** – participating schools gain access to Badge Nation membership and can issue DSP branded Digital Engagement Engage/Participate badges to students if they wish.
3. **Real Ideas Digital Futures Programme** - programmed ongoing activity and signposting to regional/national events, holiday activity and competitions as well as opportunities to engage with the state-of-the-art Market Hall centre for creative and digital (and its 360-degree immersive dome), due to open in Plymouth in March. and also participate in the Digital Futures Summit in July.

Additionally, two key points were raised by the DCMS representative at the Steering Group meeting:

- The need for an element of counterfactual assessment when evaluating and seeking to understand the impact of pilot activity on schools, students and community.
- The need for some element of in-person activity at some stage in the project, if appropriate and possible from a Covid perspective.

The plans for the project and evaluation were adapted accordingly and a deadline for school sign-up for the pilot was set for 5 February. Confirmations from 8 schools (plus one tentative) were secured out of the 23 approached within the two-week window. This was below the targeted 15 schools and not particularly well distributed across the region or type of school.

The lockdown circumstances (and thoughts – at that stage - of a possible March return) meant that many schools could not commit to giving the pilot the attention it required. Indeed, two schools declined explicitly because of current Covid pressures and others voiced more general concerns about capacity, priorities and ability to commit to additional projects at a very difficult time. However, those schools that had signed up were positive, keen to be involved, and saw the value of the approach, as did many of the sector partners who had been approached initially.

Following a Project Group discussion there was concern about the viability of the pilot as set out in the specification unless some adjustments/compromises were made to the requirements. Advice was sought from the Steering Group regarding the minimum number of schools needed to make the pilot viable, as well as the degree of flexibility acceptable in the types of schools participating and their regional spread. It was agreed that 15 schools (and 4 counterfactual) were required as a minimum.

These concerns – and the time it would then take to address them - also meant that delivery of the pilot post February half term was no longer achievable. The Project Group discussed a range of options and felt that the best course of action was to postpone once more and then run a more intensive version of the pilot across the summer term (Easter-July), using the interim period to

continue to prep resources and aim to recruit further schools (as participants but also as counterfactuals).

A further revised flyer was distributed to targeted schools with a deadline for sign up of 26 March and 14 schools were secured prior to the Easter break.