

SATRO EDUCATION RESEARCH FINDINGS

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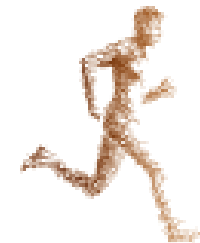
If you want to print this document, it is designed to be readable two per page to save paper

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GATSBY

Executive Summary

Objective, Contexts, Method
Key findings
Gaps and Opportunities



Research Objectives: To evaluate the services SATRO provides to help inform its strategic direction and three-year plan

SATRO's vision is to **inspire and enthuse young people about the world of work**, particularly in Science, Technology, Engineering and Mathematics (STEM) through the support of volunteers, employers and institutions, to bring practical hands-on programmes that engage young people of all abilities

- ▶ The research centred on gaining perspectives on SATRO's Mobile Construction Classrooms
 - Understanding what works well/any aspects or areas that could be improved
 - Establishing what, if anything, could be added to make the programme more valuable and useful
- ▶ The research also examined:
 - Reactions to SATRO's STEMX, Mentoring and 3D CAD offerings
 - Other services that SATRO may offer
- ▶ As part of the wider Heathrow Community Project, the research examined the provision of careers advice, in particular for Alternative Provision Students

SATRO's Mobile Construction Classrooms

- ▶ A fleet of six mobile classrooms, delivering BTEC Level 1 Construction Skills to ...
- ▶ ... students who are disengaged, disadvantaged, perceived as Pre-NEET and/or with Special Educational Needs



GATSBY

Context: Challenges faced by Schools – meeting Gatsby Benchmarks alongside OFSTED

- ▶ **In addition to meeting OFSTED requirements**, from September 2018, schools need to nominate a Careers Leader who will deliver a careers programme across the **eight Gatsby Benchmarks geared** at helping young people choose the career that is right for them, which are summarised below

A stable careers programme	Learning from career & labour market info	Addressing the needs of each pupil	Linking curriculum learning to careers
Every school & college should have an embedded programme of career education & guidance that is known & understood by students, parents, teachers, governors & employers	Students & parents should have access to high-quality info about future study options & labour market opportunities, with the support of an informed adviser to make best use of available info	Students have different career guidance needs at different stages. Opportunities for advice & support should be tailored to these stages, with diversity & equality embedded in the careers programme	All teachers link curriculum learning with careers . Students feel more engaged in their learning when they perceive the relevance of what they are studying to their own and other people's lives

Encounters with employers/employees	Experiences of workplaces	Encounters with FE & HE	Personal guidance
Every student should have multiple opportunities to learn from employers about work, employment & the skills that are valued in the workplace	Every student should have first-hand experiences of the workplace through work visits, work shadowing and/or work experience so they can explore their career opportunities	Students should understand the range of learning opportunities available , including academic & vocational routes & learning in schools, colleges, unis & the workplace	Every student should have opportunities for guidance interviews with a career adviser

Context: T-level courses are due to launch in 2020 as part of wider reforms to the education system – already delayed, some query how effective they will be

- ▶ The precise specification is evolving but it is broadly being positioned as offering 16 year three options:

Academic Route

A levels



Entirely in the classroom

Students who aim to progress to:

- Higher **academic education**
- Degree apprenticeship

Technical Routes

T levels



Classroom & industry placement

Students who want to develop work-related knowledge/skills, but are **not yet clear about the specific occupation** they want to work in.

Progression routes:

- Employment in a skilled occupation
- Higher/degree apprenticeships/levels of technical study

Apprenticeships



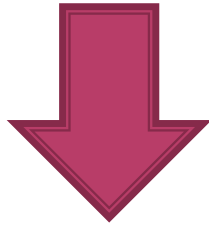
Mostly on the job

Students who want to enter work and **train on the job**, in an occupation **that they are clear they want to pursue.**

- ▶ The initial tranche will be offered by 50+ organisations and include digital, **construction** and education & childcare, with others to follow from 2021.
- ▶ **Concerns have been raised by commentators** about many aspects of T-levels including:
 - **Timing** – will they be ready? Already delayed
 - Will **employers** be on board with placements - already asked to do more on apprenticeships?
 - Will **Uni's** will recognise them?
 - Will **students & parents ...**
 - **Accept them?** A long history of education promoting/valuing academic routes
 - **Be first adoptors** or wait-and-see?

Context: Challenges facing the Construction Industry

- ▶ Mixed views from commentators on the **near and long term growth prospects for construction ...and fluctuating workloads**
- ▶ But there is general agreement among commentators that the industry :
 - **Faces skills shortages – which some report as leading to wage increases**
 - **Needs more apprentices**



- ▶ Exacerbated by
 - **Brexit**
 - **An aging skilled workforce**

RICS reports **labour shortages remain at elevated** levels after having eased throughout 2016 with 60% of contributors in Q1 citing this as **an impediment to growth.... just over half of respondents now cite bricklayers as difficult to source, this role continues to be the most challenging to fill** when compared to other trades.

Source: Q1 2018: RICS UK Construction and Infrastructure Market Survey



Research method and sample achieved

As with all small scale research, the findings in this document should be viewed as indicative rather than definitive

Qualitative research

▶ **Face-to-face Interviews with teachers/FE lecturers/employers in Heathrow Catchment Area**

- **7 schools that use SATRO Mobile classrooms**
 - 4 mainstream
 - 3 special - excluded/behavioural/autistic

- **4 employers**
 - Major construction
 - Plumbing
 - Electrical contractor
 - Building subcontractor

- **Heathrow Academy** (recruitment, support, special training, mentoring)

- **4 FE Colleges**

▶ **9 additional schools completed a short online survey focused on perceptions of SATRO's offer**

- schools outside the catchment, but currently delivering at least one BTEC course.
- SEN schools delivering the non-BTEC construction course

Quantitative

▶ **A short survey self completion survey completed by 68 SATRO Mobile Classroom students across 8 schools in the catchment are conducted March/April 2018**

- Broadly equally split Y10 (36) and Y11 (32)

- 53 in Mainstream, 15 in Special schools

Description of the qualitative sample

Each organisation was unique and different



Schools

- Gender
- Facilities and Size
- Environment and space
- Special v mainstream

FE

- Facilities and Size
- Environment and space
- Relationship with employers variable

Employers

- Size hugely variable
- Nature of business
- How apprentices are recruited

This could be interpreted as disparity. However, it also suggests representativeness of the market had we the resources to quantify

Areas covered in qualitative research

Respondents' roles



Schools

- Career guidance and guidelines, used/by whom *
- Resources to help Alternative Provision students/what else would they like
- Relationships with FE/employers
- Attitudes to SATRO

FE

- Whence come their students
- Nature of their students
- Are schools adequately resourced to fit students for FE
- Relationship with schools/employers
- Awareness of SATRO

Employers

- Whence come their apprentices
- Are they ready for world of work
- Are schools adequately resourced to fit students for FE
- Relationship with schools/FE
- Awareness of SATRO

Response to SATRO concepts and any other ideas they feel would be useful *

Key Findings: Schools generally feel 'fairly well' resourced to provide their Alternative Provision students with suitable careers advice and guidance, but more could be done

▶ **They are challenged to implement GATSBY and meet OFSTED requirements**

- Objective of education is to get students ready for life, schools have to conform to OFSTED - they are there to teach to given standards

▶ **Funding and time are issues**

- Affects all pupils, exacerbated by the diverse and challenging needs of their AP students
- Mainstream schools recognise the needs of AP students and prioritise resource
- Many rely on charitable donations and provision to fund or provide some of their teaching and careers resource (including funding SATRO)

▶ **Staff see key issues (in meeting GATSBY) # as lack of access and exposure to the world of work**

- In particular **work experience**
- interactions with employers in general

▶ **School to FE engagement OK but there are tensions**

- Schools think FE are not adequately set up for AP students
- FE think schools hold onto best performers and view FE as substandard

'No (mainstream) school can be adequately resourced for Alternative Provision, it's resource intensive'. Mainstream school



Pupils

- **Would like more employer interactions**
- **Relatively low knowledge of**
 - Employers and salaries
 - Options in FE
 - Y12 plans
 - Plans after the leave school

Key Findings: Perspectives on qualifications

- **A view that non-academic quals seen as inferior**
 - But not all AP students will get full set of GCSEs
 - Need vocational courses
 - Need life skills courses – but AQA qualification being dropped – needs to be addressed another way
 - **Parents need to be educated about the alternatives to academic quals**
- **Need for C's in English and Maths #**
 - A challenge for AP students in particular to achieve
 - too much theory
 - not practical enough applied
 - A challenge for FE
 - feel schools aren't doing it (in general) so they have to alongside teaching college courses
- **C&G vs BTEC**
 - FE views mixed (depends on what quals they offer) but BTEC is 'wordy' (too wordy?)
 - Employers prefer C&G more 'practical'
- **One comment that the naming of quals Level 1, Level 2 ... doesn't help engage students and parents**



Would 'the basics' be enough for those wanting to do a trade

Key Findings: Perspectives on apprentices and the industry

Overall there needs to be an improvement in the value placed on apprenticeships by the world at large versus an academic route with more emphasis on the longer term prospects for a career and higher levels of remuneration in time

- **Schools seem lukewarm about recommending apprenticeships**
 - Only one seems to actively push them
 - One actively challenges their efficacy 'glorified internships'
- **FE see them as a valid route to employment**
 - Some report increasing numbers
- **Employers looking for rounded individuals as apprentices**
 - Key skills are commitment, application, communication
 - If they have already done a relevant course it's a bonus (and helps show commitment)
 - Some query 16 year olds ability to think long term
- **Employers feel FE out of touch in what they are teaching**
- **Employers feel schools have too narrow a perspective of construction**
 - On the options
 - On the potential



We saw only 1 FE set out potential construction salaries – & that was hard copy not online



Careers teachers & pupils need educating

Along with **parents** – the first port of call for pupils considering their options

Key Findings: SATRO Mobiles

- **Among this sample, SATRO really only known for Mobiles Programme and only in Schools**
 - FE and Employers largely unaware (except 1 FE from a previous role)

In schools

- **Mobiles well regarded**
 - Provides a qual to those that wouldn't get full set of GCSEs
 - Importantly, gives them self esteem
- **Tutors generally well regarded**
 - Acts as a role model and mentor



A number spontaneously mention reliance on external funding

In FE and Employers

- **Mobiles idea welcomed in principle**
 - Need reassurance about tutors skill set (needs to be a tradesperson **and** have and a teaching qualification)
 - Some queries about breadth of topics (eg H&S)
 - Some spontaneously raised concerns it may be targeted only at the disengaged 'because these sorts of things usually are' – why not make them available to all?
- **Need to raise awareness**



Can construction classroom be repositioned to better attract females?

Or could there be other subjects to engage females in STEM?

Key Findings: SATRO's other services covered in the research

SATRO Mentoring

- Idea welcomed by schools (many want to know more), elsewhere mixed reaction
- Raises questions **What's the aim? How does it work?**
 - If it is to **inspire** presentations to small groups may be better (wider reach)
 - If its to **guide**, is it scalable? Costs? Sourcing mentors? Safeguarding? Shouldn't careers do that?

STEMX

- Concept of STEM challenges well known and welcomed

SATRO 3D/CAD

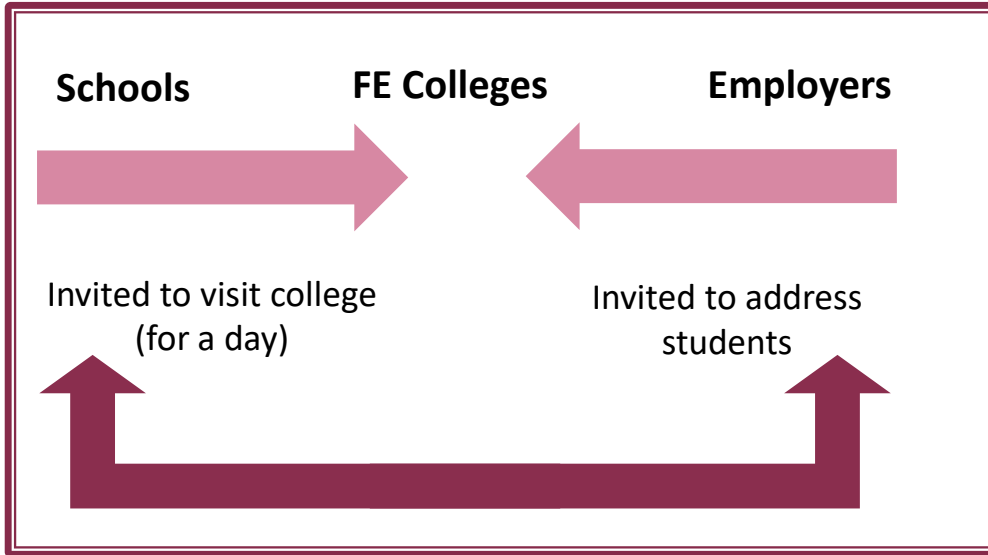
- Splits opinion – majority welcome the idea 'it's the way of work'

STEMX and 3D/CAD

Schools want to know more

Concepts shown as targeted at
KS3/KS4 : **Potential to start
young(er)**

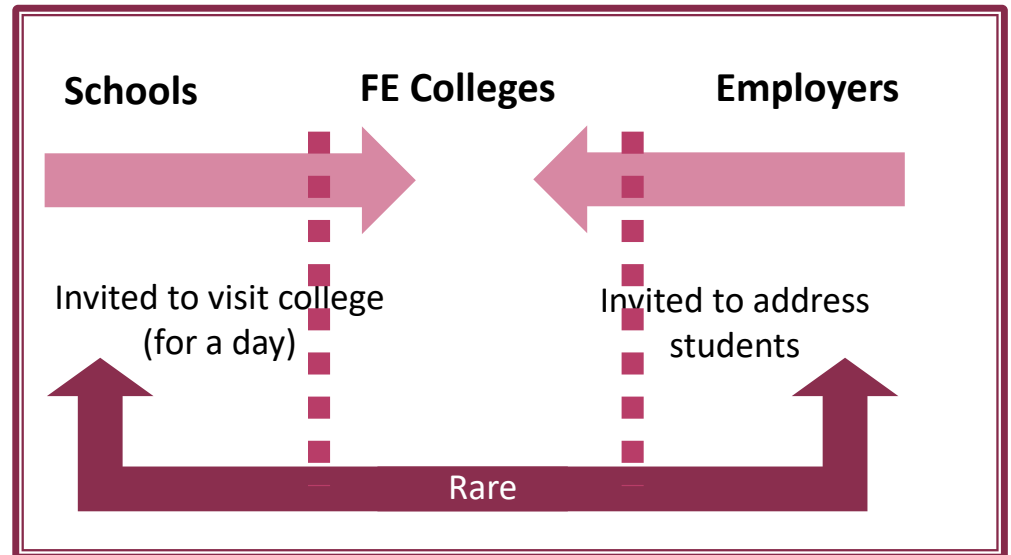
Key Findings: Communications between schools, FE, employers. With some notable exceptions, some feel boxes are often ticked with 'one interaction' till the next time



How it should be..



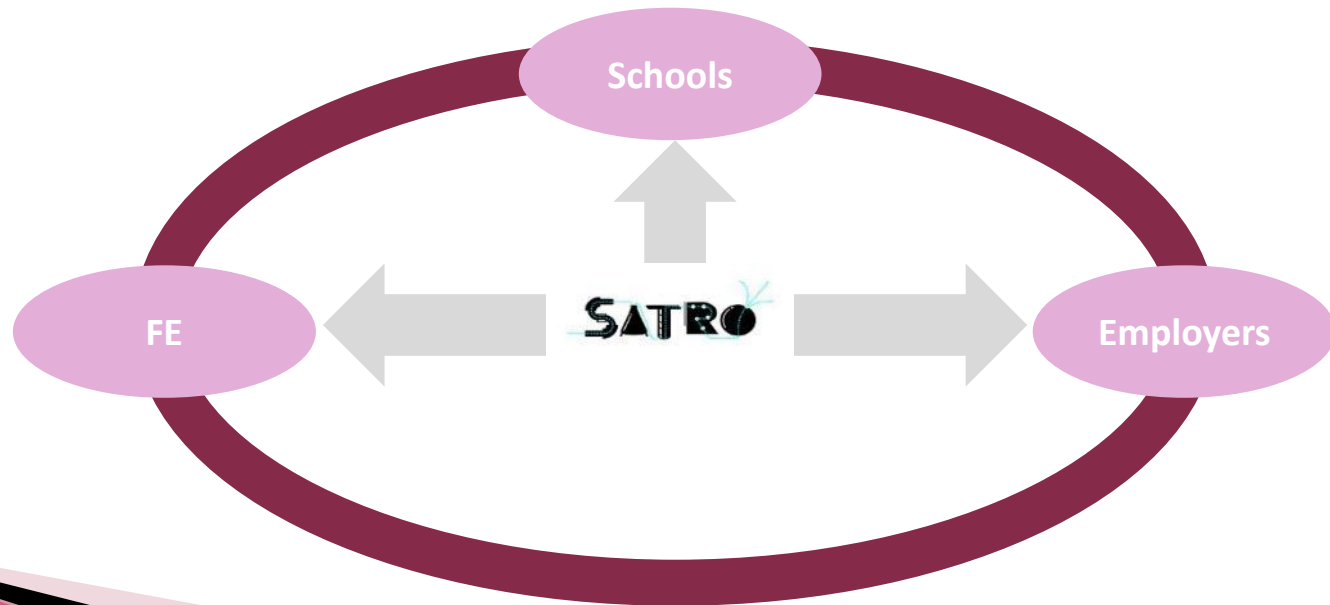
How it is... 'SILOS'



Gaps and Opportunities: SATRO needs to communicate and collaborate

- Communicate:
 - What the SATRO **Brand** is about
 - SATRO **Values**
 - SATRO **Aims**
 - **Services** offered
- **Collaborate with FE:** see what they do – show them what SATRO does

How it could be ...



Gaps and Opportunities:

- ▶ **Offer other areas of learning towards work**
 - Jewellery Making, Textiles, Graphic Design, Mosaics, Food & Nutrition, Environment & Conservation
- ▶ **Do more to actively engage females**
 - Re-position Construction Mobiles?
 - Different topics?
- ▶ **Start STEM education younger than KS3/KS4**
 - to inspire them
 - before they start choosing their options
- ▶ **Offer one off sessions and taster sessions**
 - Especially to inspire Y8 and Y9
- ▶ **Offer SATRO mobiles to A level students**
 - give them practical skills that they lack.
- ▶ **Activities with broader reach (beyond AP students)**
 - Need to focus everyone on getting ready for the world of work
- ▶ **Quals should be more descriptive to better engage students and parents**
 - 'introduction' 'intermediate' 'advanced' rather than just Level 1, 2, 3 etc
- ▶ **Provide support for teachers to run their own STEM event days**
- ▶ **Offer general life skills education**
 - Fill the gap that will be left by the 2019 cessation of *AQA's Certificate in Preparation for Working Life*



Gaps and Opportunities

NETWORK

- (Continue to) help schools identify sources of funding
- **Alliances with others with similar or complementary services likeminded aims:**
 - Construction – comms plan to leverage their industry contacts
 - Mentoring
 - Helping less advantaged

Potential synergies : activities and contacts
They can become SATRO advocates



EDUCATE

- **About the industry, where a career could lead them, salaries**
 - Use network/ industry contacts to provide presentations to groups
 - School assemblies & parents evenings *'schools choose what they cascade to parents'*
- **About the value of vocational quals and links to the industry**
 - Potential to capitalise on incoming T-levels



Parents
Students
Schools

Start young(er)
to inspire

LOBBY

- **About the need for a pragmatic approach to English and Maths tuition/quals**
- **About Recommended minimum wage for apprentices**



Or is that a step
too far?

Detailed Findings



GATSBY

Careers Guidance & Apprenticeships School Staff, FE and Employers

Schools are aiming to prepare children for their next steps in life: problems can exist in getting the options that are most suitable for the individual

- ▶ 'Next steps' starts with the options chosen at Y8.
- ▶ Efforts are often made to engage parents in the process, but there can be some pushback, and challenges
 - Around understanding
 - what might be best for the child/their abilities
 - what is available
 - For some, parental engagement
- ▶ AP students can benefit from vocational courses
 - unable to get a full range of GCSEs
 - some better served by 'learning by doing'
- ▶ Some sourced externally like SATRO, Beauty Bus, DoE
- ▶ Need for some AP students to be taught general life skills in lessons or through external programmes
 - The AQA qualification One mentioned the Prince's Trust Achieve programme



One school observed that offering these courses can be a challenge

- if they don't count to OFTSED
- the school is borderline

Schools are aiming to prepare children for their next steps in life: problems can exist in getting the options that are most suitable for the individual



We explain the courses, they have a taster, talk about progression routes; if they choose something too hard for them, we give them the benefit of the doubt. We are bringing in some courses that are more work related to re-route students who are low attainers (e.g. travel and tourism, work-based tech). They get an equivalent to GCSE – works better for them and us.

At our school, we provide our children with many skills (social and practical) in order to help them when they move on from us. We provide cookery, laundry, gardening, animal care. In addition, they all have timetabled life skills and social skills lessons

The aim is to get a feel for what they want to do and give guidance on options they should be taking to get there.

We've been using the AQA Preparation for Working Life, but they aren't running it after 2018. SENCO here taught it, thought it really useful, a shame to stop. But as quals are removed from league tables, a lot of suppliers stop offering them.

Our children that do SATRO are those that would have difficulties doing all exam subjects. Eg if they had a big workload they would find it stressful. Not necessarily just to do with their ability.

There are other routes besides GCSEs and A levels – like BTECS. But some parents don't understand/like it.

Those that are statemented, we meet the parents, can be problems if they have different views to us. Might not acknowledge where their child's strengths are e.g. art. Parents may see greater value in them doing science.

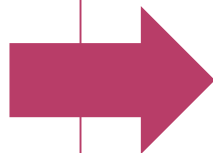


Careers advice proper tends to start around Y10/Y11 delivered by a mix of people and a range of activities - no clear 'patterns'

1-2-1 guidance

Provided by a range of people:

- Teachers
- Internal Careers advisors
- External careers advisors (ex Connexions)
- Pastoral staff
- SENCO
- In 1 an educational psychologist with an artist



Limited resources means that in **some** mainstream schools 1-2-1 sessions tend to be focussed on Alternative Provision students

Though others do provide 1-2-1s for all Y10/Y11 students

What else do they offer...?

A range: specifics and amounts vary by school

- CV & covering letters
- Mock interviews (eg with employers, governors)
- Careers fairs, Careers assemblies
- Visits to FE
- Apprenticeship fairs (few)
- Talks from local employers
- Work experience

“ We have careers lessons, a careers advisor, a careers and higher education fair. We take students to look at local colleges - BCA, Henley and East Berkshire and help we them with applications ”

Careers advice proper tends to start around Y10/Y11 delivered by a mix of people and a range of activities - no clear 'patterns'



Careers advice delivered by Educational Psychologist, with an artist. They talk about their hobbies and interests the possibilities available, and artist draws it up to help them visualise it. We talk about job profiles explaining the job areas to them. Try to do it in a fun way.

The careers advisor talks to them about what they may successful in based on their interests (e.g. if interested in animals, may not get to be a zoo keeper but what other options are available)

Every student has at least 1 careers interview with an external advisor once per year in Y10 and in Y11. Then on results day, the advisor is there to help them sign up to 6th form (or not).

All Alternative Provision students have a key worker who supports and sources their post 16 options, they are treated the same as mainstream students

An independent advisor works with us and contributes to our model. She's here a day a week and does Individual and group sessions. Not all can have this support, so we tend to target it to those on pupil premium, Alternative Provision, not going to 6th form (where they would get a lot more support from us)

Y10/11 meet real employers, for mock interviews, tips & feedback from the working community they will be going into

The pastoral team also work 1:1 with all year 11 students to ensure they have made applications to work or college (and follow up their applications)

Y11 get a next steps meeting with SLT based on what they're expected GCSEs, what is available here/elsewhere.



Relations between schools and FE: Exposure between schools and FE good, but some tensions

All schools offer some exposure to FE, and FEs report their relations with schools are generally good

▶ Exposure to FE includes

- Careers fairs
- Group Visits
- Taster days (accompanied for AP students)
- Some day release



Berkshire College of Agriculture (BCA) spontaneously praised by several schools

BUT

▶ **Some suggestions from schools that FE colleges not geared up for AP students.** Concerns about:

- Safeguarding
- Ensuring pastoral needs will be met
- Esp. given the size and nature of FE sites
 - a concern as they are vulnerable pupils
- FE perceptions of what AP students can achieve

▶ **Some FE colleges query schools' motivations & attitudes,** suggesting that they:

- Look down on FE see it as 'sub standard'
- Hold onto better learners (to keep the funding)
 - Spontaneously refuted by one school

Relations between schools and FE: Exposure between schools and FE good, but some tensions

Staff

FE

“ We need to find like minded FEs. It's been a frustration in the past they had poor expectations of our students...doing 1 day at FE - can't really quantify what was happening but sense that student spending too much time 'on break' **School**

Concern about them going off-site - they are the most vulnerable students: going off-site & spending their time with other vulnerable children **School**

BCA has open days, they are very keen to encourage us. Langley, has been less successful with large groups. It's a big site, with a lot of changes in personnel. It's a bit better at the Windsor site

We have good relationship with BCA. Have been along to have a look and see what it is like at college. The college has a special needs unit but handles in sensitively **School**

With Brooklands, we have had concerns about safeguarding. They're supposed to inform us about attendance, but the chain of communication is difficult. We have a link with their learning support which is fantastic, but there's a concern they can get lost in the system in a main college. One of our students went to Brooklands at Weybridge. Site was too big, so moved them to Ashford which is much smaller. When we look at colleges we need to be sure their (pastoral) needs will be met **School**

The independent careers advisor takes Y10 AP students to visit FEs. Overall, relations with FE are good –we'd like to know more about what they offer & give children chance to look at facilities, try them out **School**

We have a good relationship with schools. They work quite closely with us and we have good communications with them. Our marketing people go to schools and give them our course leaflets. Schools encourage Y10 and Y11 to come here and see what we offer, and we go to schools. 'Schools days' in the summer, where we offer 2 or 3 taster sessions **FE**

We have a school link provision for Y10 and Y11 - many don't take it up because of money - they'd have to pay us a % of their money per learner. Those that come to us generally see improved behaviour at school and at home, because here they are taught in a more mature way. We have a School liaison officer and taster days, open days and evenings.

My advice to schools would be to stop acting in a silo it doesn't serve the community well. They can be quite protective with regard to funding. They may see the benefit of sending some to FE, but they may try and hold onto them because that way they keep the money. It seems schools career guidance serves the school not the learner. They could send AP students and provide their own support If they want us to do the support, they'd have to pay **FE**

Schools don't tend to recommend college. Often won't tell better learners about college – they cherry pick those they want in 6th form and they think will get good grades. The school gets the money. Schools consider us 'lower grade'. Teachers tend to say colleges are a bit rubbish and try to fob off less good or their excluded children. But we teach & engage the children that they can't. There needs to be better communication between us **FE**

Schools and FE's alike recognise the challenges of students attaining C's in GCSE Maths & English – some question the necessity for all students to do so

Gatsby and T-Levels emphasize the need for Maths & English Qualifications

A T-level will generally be studied over 2 years and will include a new technical qualification... The programme will include a substantial work placement of up to 3 months as well as **English, maths and digital content**

GATSBY Benchmark 4
Linking curriculum learning to careers
 All subject teachers emphasise the **importance of succeeding in English and Maths**

- ▶ **Schools** are categorical that some AP students will not get C's in these subjects
 - The theory side makes it hard for some them – though they may succeed at arithmetic
 - The nature of the system means that not all **can get** C's and query whether their time might be better spent on other subjects like life skills

- ▶ **FE's** talking about **students more generally** observe:
 - Many they see come from school without C's in English & Maths
 - Teaching these lessons alongside college coursework is hard
 - They Acknowledge a basic level of competency is needed
 - But question whether GSCE level is necessary for those moving into trades

- ▶ **That said... one employer did flag a need for C's in Maths and English**

“They just need grade C English and Maths. I've been doing this for over 30 years and if they don't have grade C maths they will struggle in year 2 and 3. If they haven't got that, no matter how good they are, taking them on wouldn't be doing anyone any favours”. **Employer**



Schools and FE's alike recognise the challenges of students attaining C's in GCSE Maths & English – some question the necessity for all students to do so



A lot won't get grades in English & Maths and will have to do that at FE. They may have functional skills in English and Maths, but theory side is very wordy and not helpful to our students who would do better with arithmetic. **School**

Some of the SATRO students categorically will not get a C in English and Maths – they are level 1 students. We'd hope, with our relationship with FE, we could negotiate with them to let them into FE without the English & Maths.

The system is flawed, in that there is no way all can get a C – that's the way the system works. Some miss out for fair reasons, and re-sit. Those that get the equivalent of a G or F are never going to get it. Why put them through two years more for something they are not going to get. Why not offer them something useful – like the AQA life skills course that's being dropped, rather than slogging away at courses they are not going to get. **School**

Lots of won't get C's' in English & Maths... The angle we sometimes take, to not dishearten them, is that some successful people don't have good academic grades **School**

They should ideally come with Cs in Maths & English, else they have to get these while at the college, which can be a problem. Some students aren't motivated to go to these classes, attendance can be low and if didn't attain at school can be a challenge – an issue across the college. These can be mainstream students that just didn't get C's in Maths & English at school. Schools could do more to get the students through the Cs in Maths & English. In reality students only need key skills, a lot of GCSE not relevant if you want to be a chippy, but they must have them **FE**

Children tend to have low Maths & English. If Maths is taught as a practical skill, and taught enough on the job – it becomes second nature. **FE**

Ideally, they come with C's in Maths and English so that they can concentrate on the course. Not all do, Don't reject those that don't but find them the right course level. If they have the C's they need, they can start at level 2. **FE**

This is hands on learning. We're trying to provide practical skills alongside English & Maths – most don't come from school with required grades **FE**



Virtually all schools claim have offer 'some' encounters with employers – though some only do work experience at 6th form

➤ **A widespread desire for more encounters with employers:**

- in school
- in the workplace
- work experience



Also need to consider safeguarding, H&S

➤ **Hampered by**

- lack of resource for all children to do all things
- lack of industry contacts

➤ **Variety of external organisations used by schools to help get students exposure to work and employers**

THE CAREERS &
ENTERPRISE
COMPANY

spark!
KICK
STARTING
CAREERS

mosaic
the power of positive thinking
...business mentoring

Ambitious
about Autism

Learning to Work

...to help work relationships
and try and get employer
experience

MCH Maidenhead
CYCLEHUB



... cycle projects for work & life experience

Virtually all schools claim have offer encounters with employers – though some only do work experience at 6th form

If you look at **GATSBY** we are doing quite well. Hardest bit to fulfil is **work experience**. They have interactions with employers from Y7 onwards. **Organisations come in, like Centrica, Lawyers for Schools**. We work with **Mosaic business mentors** - they work with groups or individuals, especially disaffected Y10 or Y11. Students with a degree of disadvantage, we are concerned with them becoming NEET. Often academically capable but under achieving. Local business people come and try and motivate them – they take up to 20 students a year.

We don't do work experience, we would love to, but it is prohibitively expensive. In reality, we can't really set up work experience for 150 students. Vetting, H&S, etc we would need to outsource

Tried to get SEN work experience through Learning to Work, but **it gets harder and harder**.

Our assistant head was at a careers event recently, when someone from another school suggested getting the parents to come in and give talks. That just wouldn't work here. Our **next steps will be stronger links with local businesses, facilitated by external people**.

We don't offer **encounters with employers but it would be welcomed**. For construction students things like site visits – to a new build house, to a builder's merchant

GSK very active with them, but tends to be more science based, they do cover things like marketing etc. **Try and match them to what they want to do but it can be difficult**

Some do day work experience - boys often want to do trades/ construction, girls want to do music, law, beauty, but **it's hard to get them placements**

We need more

...systematic **work experience, and opportunities to work with businesses in school**

...**external visits** so students can see exactly what goes on in the **workplace**

...**employer engagement and work experience**. Tends to be very targeted at the moment – like local shops. Because of their age, DBS, H&S, not likely to go to constructing for work experience

Besides work experience, resource: money and time, better local links would help delivery of careers guidance



General lack of funding in education. I've heard of teachers in other schools having to buy own materials. I could spend whole year doing (external and internal) bids for funding, which is a lot to do on top of teaching. We need guidance available to all students. **Currently have one member of staff working on this**

Being able to **timetable a 50 minute lesson session each week** for the children to explore the different options they may have when they leave us

Issue is not enough money. We get less than some other locations in the county. Local charities help us pay for SATRO else we couldn't afford to do it.

More capacity for someone who KNOWS our pupils and their aspirations/capabilities to guide individuals

Links with other schools career fayres

Knowledge on options locally, more local companies taking apprentices especially for the trades

There's never enough money. We need of what we do now - meeting employers etc. People that could do **interesting and imaginative talks** (can be a bit dry the ones they get). Provide **connections** with the outside (working) world. Things that give them **something to aspire to – Uni, apprenticeships.** Letting them know the options available. Wish list **may also be placements for SATRO students**



School Perspectives on Apprentices, FE Perspectives on Apprenticeships

At best, most schools' perspectives on apprenticeships appear to be lukewarm

- ▶ Several mention that they are there as 'an option', one cites them being part of their school careers fair.
- ▶ But only **one appears to push apprenticeships** – and includes a visit to a national apprenticeship fair as part of their careers guidance. But they do query whether employers realise what help they can get.
- ▶ **Another is quite scathing** about the quality of current apprenticeships and their positioning and feels they need to be improved
 - Glorified internships
 - Pushed on the less bright or excluded
 - Less valued than academic routes
 - Need to be available, accessible, and supported by a genuine opportunity to learn
 - But does question 16 year olds ability to think long term



FE are dedicated to their construction students and see apprenticeship as a valid route to employment

- They report good relations with employers, and high/growing numbers of apprentices
- One spells out potential earnings to help motivate

School Perspectives on Apprentices, FE Perspectives on Apprenticeships



Apprenticeships are much lauded by government but I question whether they deliver. My sense is that they are more likely to be offered to those aged 18+, though **some are just glorified internships.** Less so trades, more services type roles, sitting in offices photocopying. **They need to be available, accessible, and supported by a genuine opportunity to learn.**

Why has it changed form 10-15 years ago? Lots of people now in their 40's and 50's went that route and are very successful now.

An issue is that **who at age 16 has the ability to look long term.** At the same time, **they may not want to go back to school 2 days a week** – they would rather be at work 5 days a week. Sometimes **they are pushed onto those that are less bright or excluded.** It's a product of the education system that it under-values vocational education. It's a two-tier system - if you're academic, that is valued. **If you are not bright enough, you have to do the 'substandard' vocational things. School**

Our aim is to improve them socially and give them something to go onto, like college places or Apprenticeships ...we take them to the Apprenticeship fair at Sandown Park... Apprenticeships are mainly through FE, because employers often don't realise what support is available. **School**

We go to things like SkillBuild (run by CITB). Talent spotters come to the regional heats. We work with businesses like BBC, Chelsea Football Club. Sometimes we lose our students to them as apprentices, that's OK. **FE**

We have good relationships with employers. Mainly 1-man bands that provide work experience, every level 2 and 3 learner gets work experience. Plus, some large organisations, like Hounslow Council. It's been very successful this year, many have stayed on with the employers as paid staff or pre-apprenticeships. We get a lot of employers call and ask if we have anyone who wants to be an apprentice. We can put forward say 10 to hear what's on offer. **FE**


We quote potential salaries in prospectus And share this with parents. We look at data - make it factual to manage students expectations and bring it to life. A Labourer can expect £13 per hour. An Apprentice, in construction, can earn more. **FE**

Relationships with employers is good. No. of apprenticeships is growing. Getting several thousand pound sponsorships, free materials, screws etc and the sponsor pays the VAT which all helps. Plumbing and electrical trades, a few years ago there were fewer employers, so the students could end up leaving to no job. Reputable companies are now using us for apprenticeships. **FE**



Employer Perspectives on Apprentices and Apprenticeships

- ▶ Queries about school and pupil awareness of the range of construction roles available and potential earnings
 - Some question young peoples ability to think longer term
 - Apprenticeships 'overlooked'

 - ▶ Employers/Heathrow Academy emphasise need for apprentices to be rounded
 - Personable
 - Communicative
 - Dedicated
 - Team players
 - **Committed**
- 

Some feeling some apprentices cannot

 - Take long hours
 - Commit to training

A relevant qualification can suggest an interest/commitment
- ▶ Govt recommended minimum wage (£3.70 for year) criticised # no wonder some don't stay the course
 - Can pay a living wage, but some stick to the minimum : 'a labourer not an apprentice'

 - ▶ Some cite fluctuating workloads causing problems for employers taking on apprentices

 - ▶ Smaller can be more nurturing
 - Guidance on how the business works
 - Perform/provide a mentoring role
 - Some views that by early 20's an apprentice starting at 16, and a Uni Grad are at the same 'place' = but the apprentice is more worldly wise and less likely to have wool pulled over their eyes

Employer Perspectives on Apprentices and Apprenticeships



The apprenticeship wage is stupidly low £3.70 per hour mandated by govt as a minimum and industry follows because they can. Apprentices can be short-termist – don't think about long term potential earnings £80-90k. Just think about how they can earn £10 an hour at Lidl today.

Our apprentices get £5.77 ph. for their first year – OK for a 16-year-old. If you take them on at 18 and pay them £3 odd...who's going to do that? Govt should look at the contracted amount. A JIB electrician at 21 should be earning £18 an hour for a 45-hr week. Our electrician supervisors doing shifts and overtime can be on £120k per year.

Things we look at in recruitment: attitude, speaking properly, commitment etc do they show commitment to 'something' in their lives eg a hobby. Qualifications are less important but if doing a course on plumbing or heating, have a relevant C&G or NVQ shows an interest.

We will commit to them but there needs to be continuity/pipeline of work. We often have 6-8-month projects. NVQ takes 1.5 years

Some of the things being taught at FE are not relevant to the job. Lack of electrical knowledge is a big issue for plumbers. Fault finding on boilers, Honeywell Y plan & S Plan, this is bread and butter stuff. How to ...use the new app operated systems...connect and use HIVE systems, NEST ...use a multi meter ...make good & when to call in a contractor. At college they look at piping, soldering, but these days it's a lot of push fit piping. Colleges are behind the times.

Need to educate teachers, plus family and friends, about construction. Secondary schools should do more. There's an argument that we should really go back to primary schools. 12+ is not viable to inspire them. STEM encounters with females should be younger aged 7-12. But we are all focussing on 15+. There needs to be better communication with schools and FE

Apprenticeships can be a good way to build a career. There's a need to communicate, using real people. Schools need to have better awareness of different roles in construction – engineers, estimators, buyers, commercial roles

Children need to understand opportunities in construction – that its not just trades, plumbing, etc. Have to relate things back to H&S, do they understand that in schools?

With our apprentices, we also train them about how to run a business. Talk to them in the van between jobs. Show them invoices, contracts and things. British Gas won't teach them that. We see it as being part of an inclusive society.

The message that parents and schools give is that they should go to Uni. Dilemma is if they are too bright for hands on work, but not bright enough for Uni. Apprenticeships aren't being 'sold' these days and in fact many just labourers.

Going the apprentice route, you learn how to do things and people can't take the mick down the line. Don't think much of a lot of apprenticeships on offer. Not all employers are good. If you're on £3.70 an hour, you're a labourer. The big companies often don't have the balls to stick with an apprentice -go for foreign labour. We don't leave apprentices to work alone - they're not labourers or skivvies.



The student survey:

- **A self completion survey with SATRO Mobiles Students**
- **In schools in the Heathrow Community catchment area**
- **Conducted March/April 2018**

Caution should be exercised in interpreting these results due to small sample sizes. They should not be extrapolated. Rather they should be looked at for indicative patterns only

Careers Guidance Student Views

More can be done to educate students about FE & information on careers & the labour market

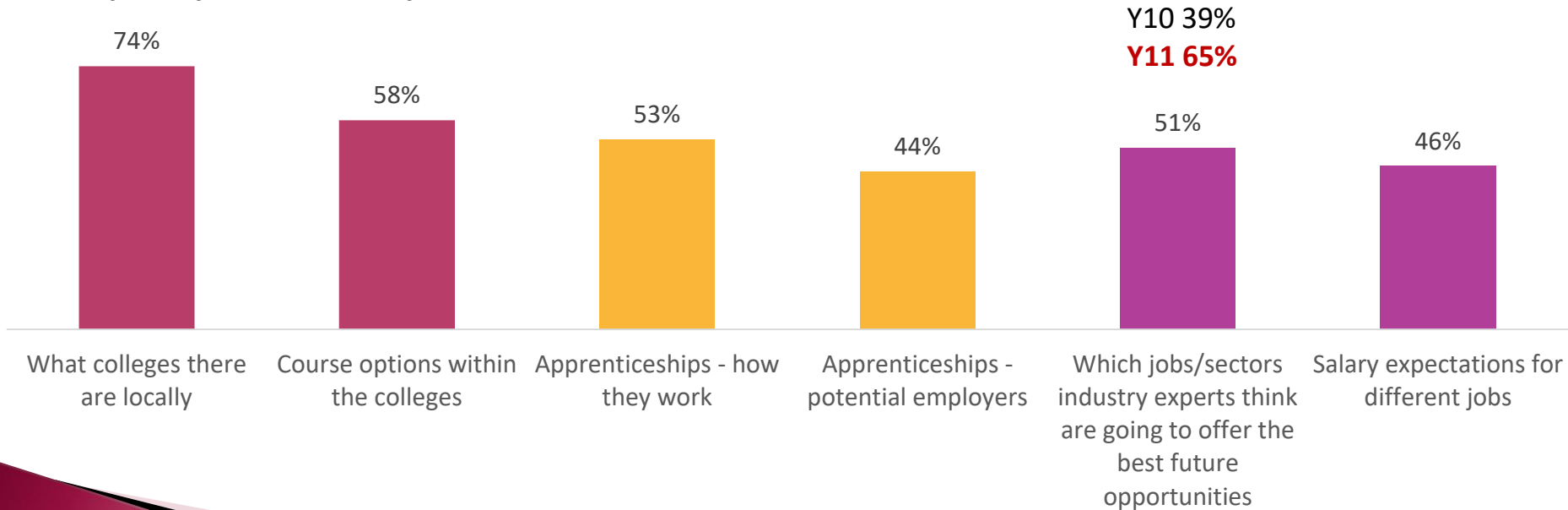
- The majority (74%) are confident they know what colleges there are locally;
 - Fewer (58%) feel informed about the specific courses available

- Overall, around half feel confident that they know:
 - How apprenticeships work and who offers them
 - What jobs will offer the best opportunities (higher among Y11)
 - Salary expectations



We saw only 1 FE set out potential construction salaries – and that was hard copy not online

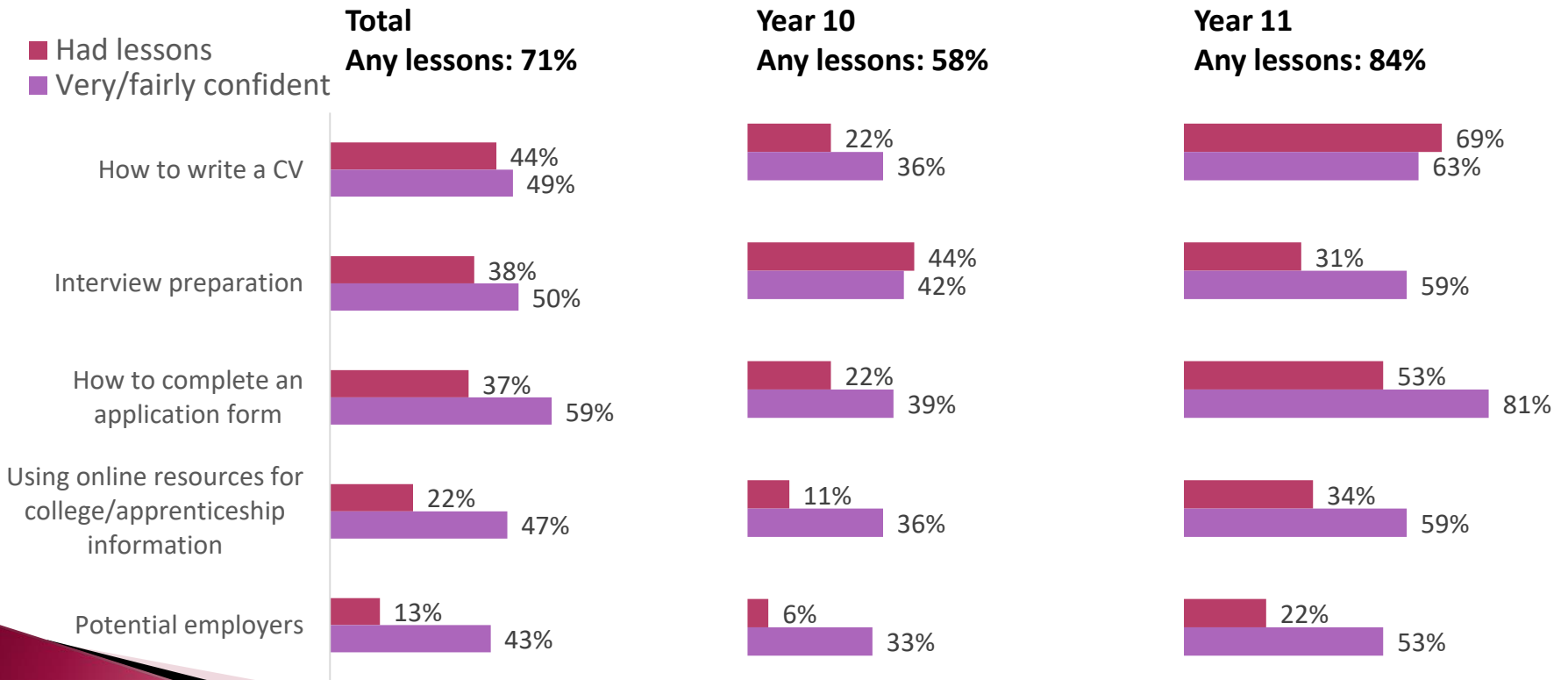
% very/fairly confident they know about ...



Most students recall some lessons about preparing for the next stage after school

- Y11 have had lessons on a wider range of things relating to their next steps after school, and are generally more confident than Y10 in their ability to tackle these things, especially completing application forms

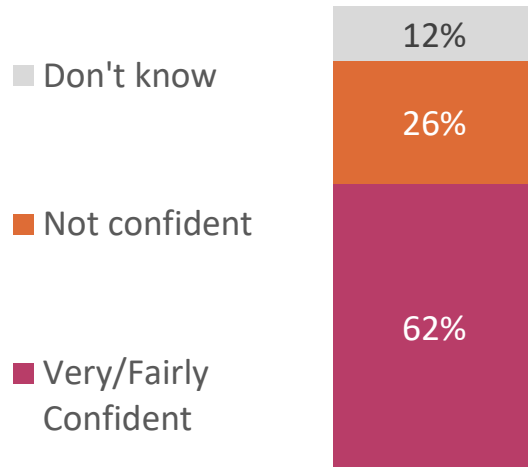
Caution should be exercised in interpreting confidence in ‘using online sources for college/ apprenticeships’ and ‘potential employers’: in part this may reflect their interest in pursuing these specific routes



Scope to improve students' understanding of how their studies link to possible careers – esp. given Gatsby recommendations on how this encourages learning

- ▶ Most feel 'confident' that they know what careers relate to the favourite or best subjects
- ▶ But 1 in 3 do not

How confident know enough about which careers best match your best/favourite school subjects



Gatsby #4
Linking curriculum learning to careers

All teachers link curriculum learning with careers

Students feel more engaged in their learning when they perceive the **relevance of what they are studying** to their own and other people's lives

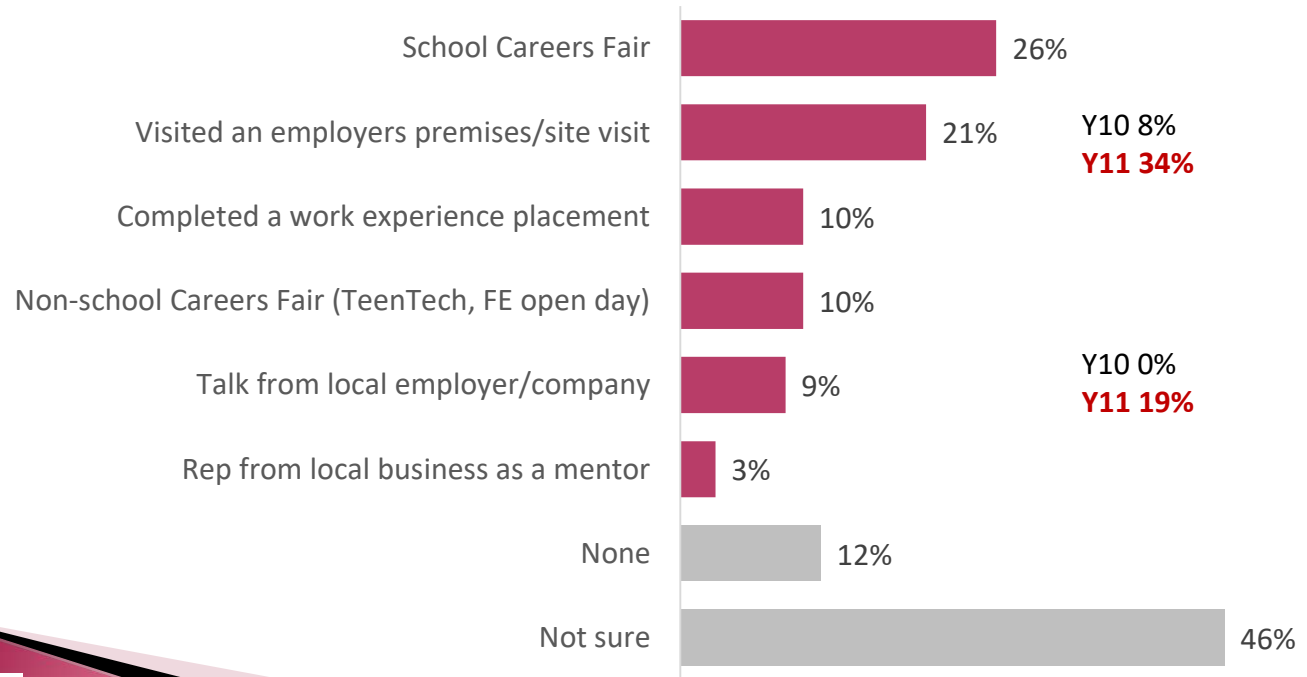


GATSBY

Many students couldn't recall their school facilitating any employer interactions in the past year

- Less than half were able to list an interaction with employers facilitated by their school in the last year
- 1 in 4 had met employers at a school careers fair (26%)
- Among Y11's:
 - 1 in 3 had visited employers' premises
 - 1 in 5 recall having a talk from a local company via their school

Interaction with local employers in last year, via school



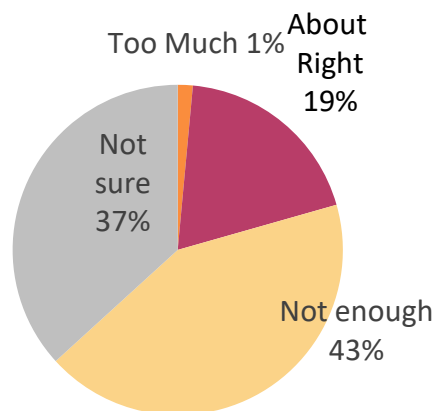
Q6. What interaction, via school, have you had with local employers in the last year? Base 68

Few students feel they have had sufficient exposure to employers

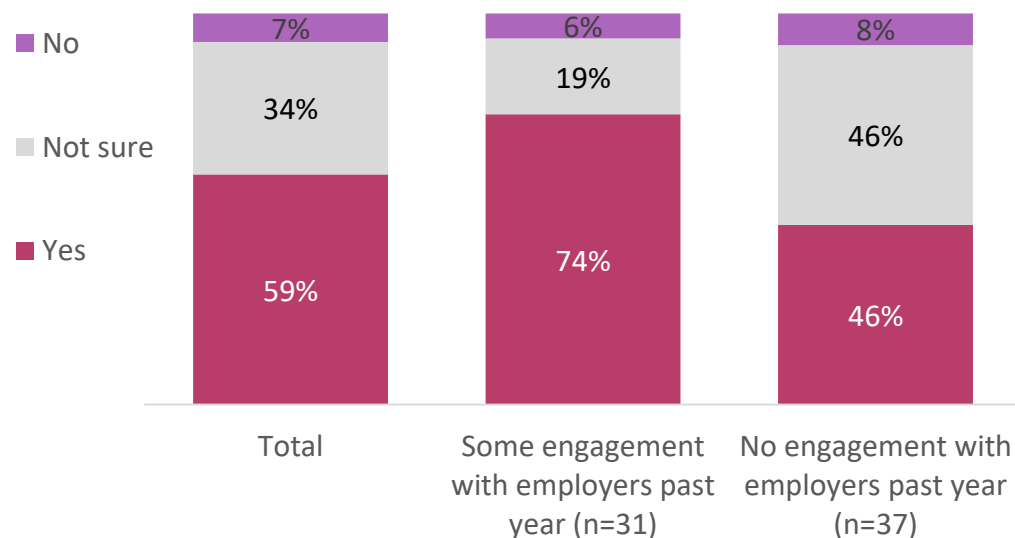
- Only 1 in 5 students feel they have had sufficient opportunities to engage with employers, (though many were unsure)
 - No difference between Y10 and Y11

- The majority feel that engaging with employers is helpful in informing them about what to do after school
 - Especially those with first hand experience of meeting employers in the past year

Number opportunities to engage with employers



Does engaging with employers help you to decide what to do after you leave school



No clear preference among students for how information about careers and next steps should be communicated

➤ It is inevitable that individual students **will have some their own learning preferences**

BUT

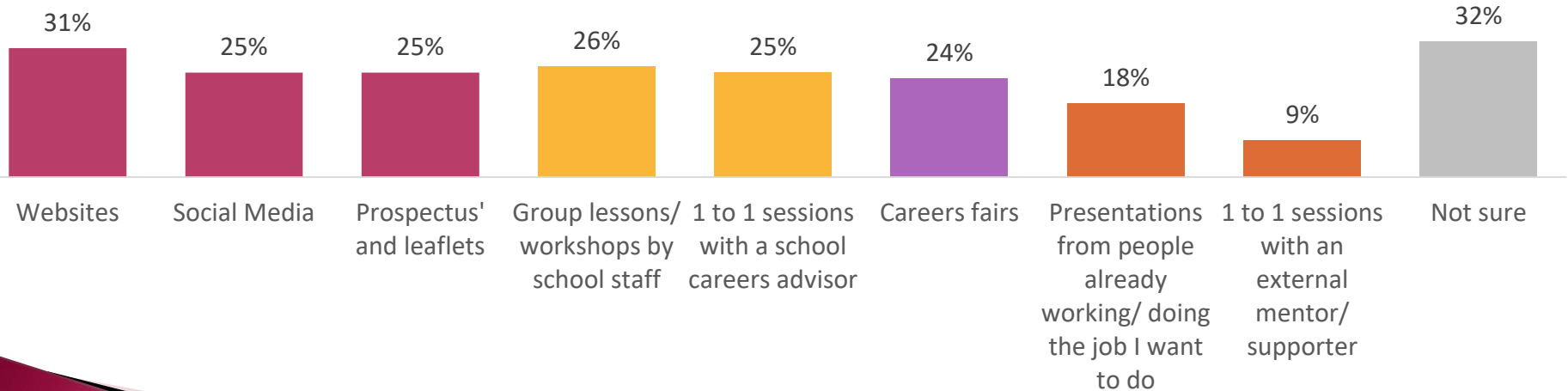
➤ What is unknown **is the extent to which these students have had exposure to these various approaches:**

- At all
- How effectively



Both of which may influence perspectives of what could be most helpful to them

Y10 22%
Y11 41%



Most students look to their parents for advice about what to do after leaving school

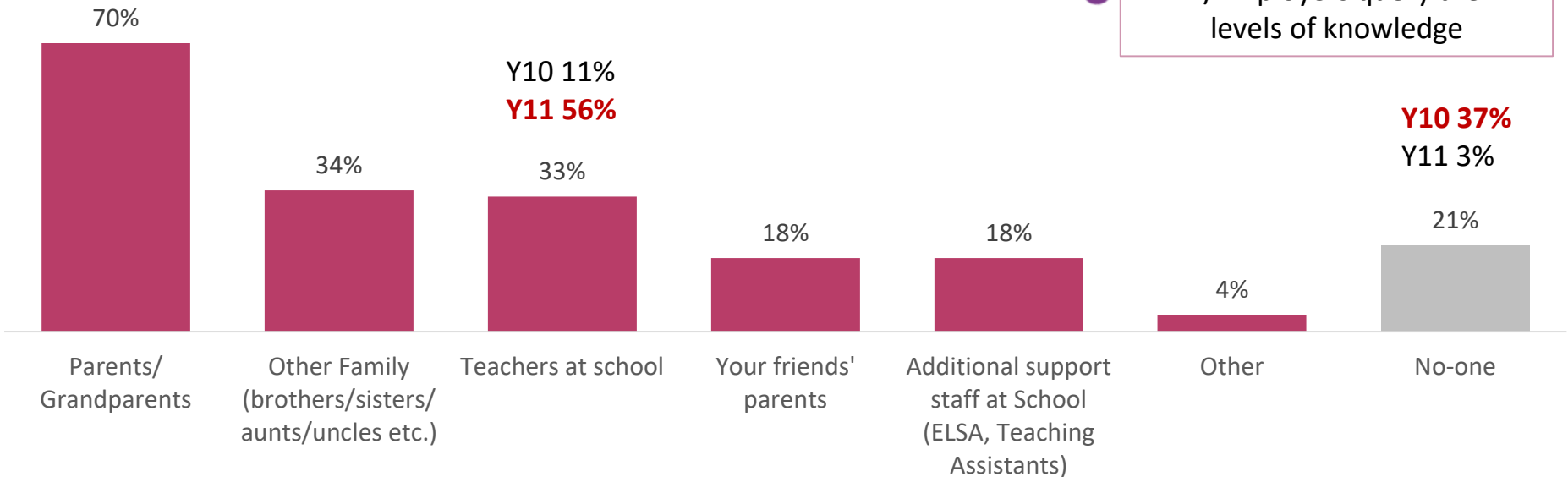
- Virtually all of Y11 have sought advice in what to do next: and half say are likely to look to their teachers for advice on their next steps
- More than a third of Y10 say they haven't spoken to anyone (yet)



Parents: 1st port of call but Some staff/FE query their engagement/ knowledge



Teachers: 2nd most likely to be asked by Y11, but some FE/Employers query their levels of knowledge



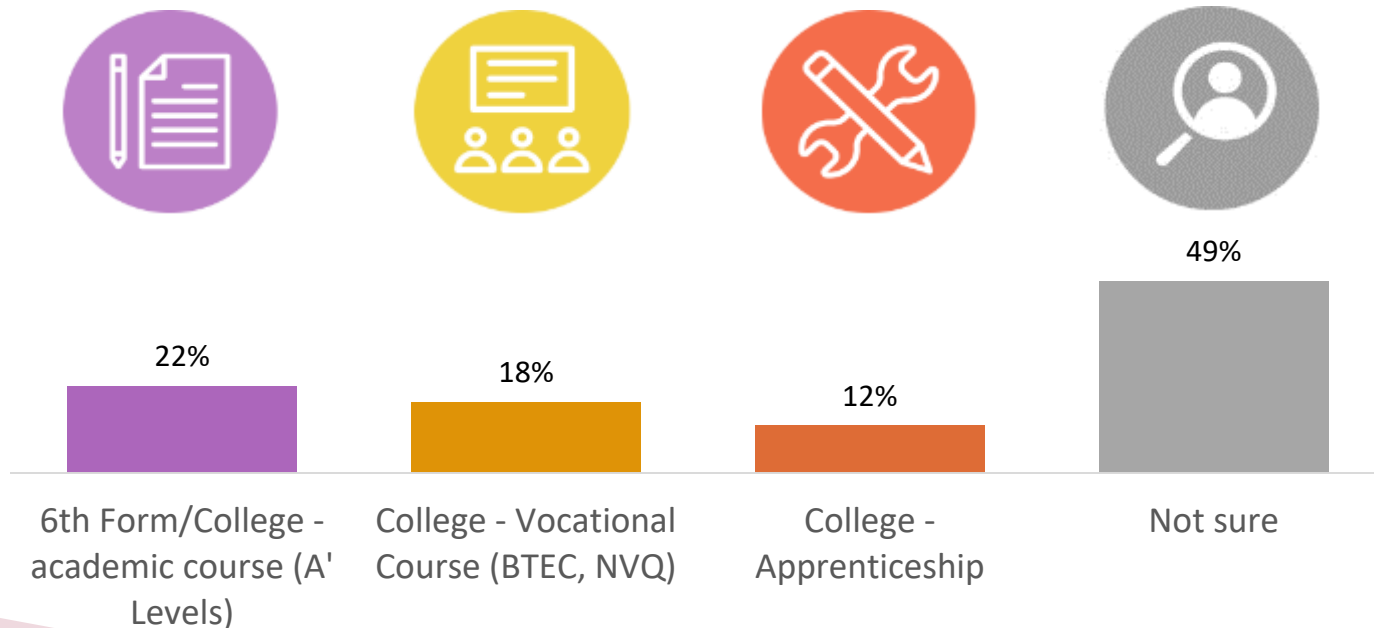
Half were unsure what they planned to do in Year 12

- This lack of certainty around their next steps was as prevalent among Y11 (44%) as it was in Y10 (53%)
- Some indications that:
 - Y10 more likely to be consider an **apprenticeship via college (19%)** than **college vocational courses (8%)**.
 - By contrast, virtually **no Y11's** considering an apprenticeship via college (3%). Those that knew their **Y12 plans were broadly split between those planning a vocational course at college (28%)** and **6th form (25%)**



Even though the survey was completed March/April

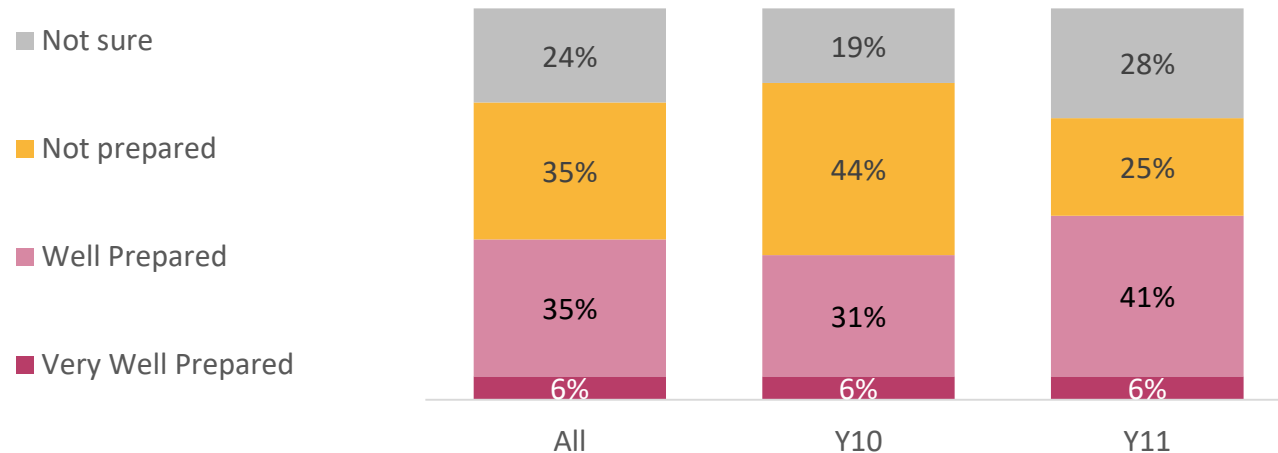
Plans for Year 12



Less than half feel they are prepared for life after school

- No real difference by year group in the proportion feeling prepared for their next steps after school
 - Though Y10 are more likely than Y11 to state that they feel 'unprepared' – perhaps unsurprising as they are a year behind

Overall, how well prepared to you feel you are to take the next steps after you leave school?



Perspectives of SATRO

Low awareness of SATRO and what SATRO does

- ▶ Almost no previous awareness of SATRO in **FE, Employers or Heathrow Academy**
 - One FE college aware of SATRO from a previous role (awards, Mobiles)
- ▶ In **schools**, all familiar with SATRO mobiles (all were users of the service)
 - Virtually no knowledge of other things SATRO does
- ▶ Few said they heard about SATRO directly from SATRO
 - Others mentioned past other staff with past experience, funders



Response to Mobile Classroom Concept

SATRO Mobiles: Transforming classroom learning into vocational futures.

The SATRO fleet of six mobile classrooms works in partnership with schools and youth organisations across Surrey & the South East.

- Informs and educates young people about the construction industry and associated careers
- BTEC Level 1 Construction
- All tutors are tradespeople, and have a minimum of the PTTLS training qualification
- This service is available to key stage 4



School staff attitudes to SATRO Mobiles almost universally positive

- ▶ An **extra qualification** for those that won't get full set of GCSE's
 - One commented it enables pupils to can go straight to level 2 at college
- ▶ Gives **pupils self esteem**, shows them they have talents outside academia
- ▶ Suits students better suited to **hands on learning**
 - One commented that some of the theoretical parts is hard for some of their students
- ▶ A few say it **reduces truancy/non-attendance**
- ▶ **Funding: a number spontaneously commented that SATRO Mobiles were funded by a charity and without that support they would struggle**
- ▶ **Generally very positive comments about the tutors**
 - Tolerant, make allowances for the pupils, know their stuff, a good role model, acts as a mentor
- ▶ **Few had suggestions for improvements** – these tend to be specific to the school
 - A couple would like site visits added
 - More time on skills like brick laying, paving and less on carpentry as have access to that here
 - Potential for undertaking Level 2
 - Working more closely with support staff to galvanise them in helping – eg briefing at the start of each session

School staff attitudes to SATRO Mobiles almost universally positive

“ The **interaction with the tutor is great**...He is like a mentor to them without it being official. They talk to him in a different way to staff. It can be hard to engage with them about what they want to do. By the Tutor, they are treated like grown-ups. Opportunities to use the tools, feel that they are trusted. He lets them work at their own pace on their own things. They get something to take home which **gives a sense of achievement**

All last year's SATRO students went on the FE to do a trade...**SATRO gives them opportunities they wouldn't get elsewhere**. They can go straight to BTEC 2, a year ahead of someone that hasn't done the course. Their faces when they see the things they have made. And that they can see things through

Couldn't believe what they were offering – so much – the **tutor** is brilliant. **Funded** by SHANLY (which SATRO helped us get). Would be all of our budget otherwise

It's half **funded** by Shanly – the most expensive thing that we do, but it is our most vulnerable students, so it's important

Tutor doesn't get rattled by our children just because they are not perfect. He's older, and not a teacher – acts as a guide and mentor, it's about an approach to life, not just construction

An opportunity for students that aren't academically minded to learn. The **tutor** is great

We probably wouldn't be able to do SATRO without **financial support**...looking to put in a bid to get more funding

SATRO is **fantastic** for those yr. 10's on it. They are doing well. The students have benefitted from it massively. A qualification that is useful to them. By and large, these students wouldn't get a full set of GCSES. They get **skills & confidence**

If we didn't have this, would maybe see more truancy or excluded

FE & Employer reactions to SATRO Mobiles generally positive – with a few caveats

FE

- Anything which gets construction into their lives is a good thing
- Need **reassurance** that it is:
 - Proper tradespeople
 - With a teaching qualification
- **Concern it is not just disengaged pupils** pushed this way because do not know what else to do with them : should be available to all
- **Mixed views on C&G vs BTEC**
 - One prefers C&G, (teaches C&G)
 - Another happy with BTEC (teaches BTEC) –but more important that pupils end up with the skills – not just a qualification
- One suggests descriptive names would better engage and attract both students and parents *'introduction' 'intermediate' 'advanced'*

Employers

- **Approved** as a way of opening their eyes to construction, with **some provisos**.
- Needs to :
 - Be delivered in a way which **inspires**
 - Show not tell
 - Embrace technology, digital
 - Show them where career could take them
 - Be **up-to-date**
 - Be **relevant** to construction
 - Not just trades - wider
 - Look to the future (eg renewables)
- Hope it includes life skills as well as hands on
- **Employers with an opinion prefer C&G** (or NVQ Level2)
 - Uncertain what BTEC is

FE & Employer reactions to SATRO Mobiles generally positive – with a few caveats



Anything that gets construction into their lives is good. I'd prefer C&G... more practical than BTEC which is quite wordy...some of our students struggle with BTEC. Need clarification that **tutors are proper tradesmen** and not just teachers 'having a go' FE

Who decides who does this? The schools? What's their criteria? **Sometimes the disengaged get pushed towards** these type of things. But there **may be others that would be interested** but they don't get a chance because disengaged are prioritised FE

OK as long as they are **tradespeople and they have a teaching qualification** FE

Looks good, but **what sorts of students?** Historically, I'd say this is usually for the **non-academic ones**. What about **every single student having access** FE

What's the aim? **Is it to give young people a snippet** of what they may do? Could be quite good as long as it has **relevant** parts of what the trade is about. Youngsters are not interested in being told they want to see things. **Need to look at ways of piquing their interest**, show them where these things **could take them in their career**. Worcester have a gadget van – shows them about renewables – solar etc – which is the future Employer

As an industry we are archaic in how we present ourselves...SATRO bus needs to **inspire, be interactive, embrace technology** Employer

Who does the teaching? **Needs to be relevant** – not someone working in industry 20 years ago Employer

Good if it **helps them understand if they want a career in construction** – some think construction is mucky, someone standing in a hole. This work's if you can attract ¼ into construction – give them an insight into what's it about. You need to **ignite a spark into them** Employer



Response to Mentoring Concept

SATRO Mentoring: Award winning support for young people

- Linking trained volunteers from the business community with students in local schools
- Developing one-to-one relationships with students who may need support to realise their potential and identify academic and vocational opportunities
- This service is available to key stage 4

THE CAREERS &
ENTERPRISE
COMPANY

SATRO Mentoring concept viewed positively - a good idea in principle, more information needed on how it works in practice, different views on what it could do/should involve

Schools

- A number want to know more
 - Including one with past experience of 3rd party mentoring (to mixed effect) and since keeps mentoring in house - but would still like to know more about SATRO's offer
- One school offers this via MOSAIC business mentoring

FE/Employers

- Some raise the issue of cost & need for funding
- Good for those struggling FE
- Help them understand about the reality of work Employer
- A (male) role model for those without one FE
- Employers do their own mentoring – in-house mentors, one informally, one via STEM Learning

Queries about:

- **The aim what it is trying to achieve** – one employer queried if the aim was to educate 1-2-1, careers advisor should be doing that
- **How it works:** is it a programme? A one off?
- **The role of the mentor and the mentor / pupil relationship**
 - Several noted the **difficulties of getting good mentors**
 - A couple of schools flagged how their **students have difficulty relating to new people** – one suggested there may need to be a 3rd party, at least at first, for reassurance for the learners
 - One employer urged caution that the mentor doesn't tip over into a 'selling mode'

SATRO Mentoring concept viewed positively - a good idea in principle, more information needed on how it works in practice



We know SATRO offer this to students that are struggling to see which way they are going, it can be very powerful. We'd need to think what the target groups will be. Probably students at risk of being disengaged Y10/11...those on pupil premium, struggling academically
School

We do not use this service as our learners have key workers - however this is very valuable for those students who have no designated adult to support them
School

Mentoring is useful, but it's hard to get good quality mentors. What are they doing – mentoring or coaching?
School

A good idea. Can work with those that are struggling, or those that have just fallen back and need a bit of help shorter term. Would be great if this was offered to colleges. A good full-time mentor would be fantastic, but expensive. Adults that can talk from experience, not necessarily trades, experienced in life. Some young people think they are owed a living – need to give them a realistic perspective that they've got to do things for themselves. Maybe not retirees...can lack patience and tolerance ...young people can be 'swear' **FE**

This is brilliant. Should include things like Mock interviews, CV writing. We did something a bit like this a few years ago (for the level 1's). **FE**

This type of engagement requires investment. Our organisation is prepared to pay but we do need to see ROI
Employer

This could be a good way for them to hear about the reality of jobs. 16-18-year olds is probably a good enough age
Employer

There's a power that adults have over children. Need to be careful with this sort of thing that the adult is not trying to 'sell the idea' to them. Mentoring could be a good idea but must not be a Sales role...

...If it's just for kids that are 'not sure' that should be a job for careers advisor or their parents. Sometimes careers teachers aren't that good e.g. knowing about different types of electrician. It would be good if careers people knew more about what we do
Employer



SATRO Mentoring sparked spontaneous suggestions that while 1-2-1 mentoring is good, if the aim is inspiring group activities would have wider impact

- Under the banner of querying what mentoring is trying to achieve, several suggested group sessions with different employers could have greater impact ... by reaching more pupils
- One suggestion was to work with CITB and local authorities to help galvanise and achieve that
 - This was from an employer who also queried careers advisors levels of knowledge of the wider construction industry – so could also help address that issue within the school



It would be helpful to have specialists come in and talk to them – how they got into the trade, what the kids might expect out of it – specific trades. About their growth as a trades person **School**

Is it a long-term thing or just a few questions as a one-off?

Is it a presentation and Q&A for say 10 kids about how does industry work? That could be someone like me.

We could share information with schools, via local education authority. Or do round robins at the schools. It would need to be initiated by someone like CITB

Employer

Mentoring could be good to support learners, but I query what exactly this type of support is.

1-to-1 mentoring is OK. But they could get industrial specialists in to schools to talk generally...**would have greater impact if done as a group thing. They could** describe their journey. give them live examples, scenarios to bring things to life.

If they tell 10 pupils then 5 might get inspired. **FE**



Response to SATRO STEMX Concept

STEMX: Promoting STEM excellence

- The SATRO STEMX Challenges bring Science, Technology, Engineering and Maths to life
- Portfolio of activities and challenges to engage students with the practical application of STEM
- This service is available to key stages 3 and 4



Almost no awareness of SATRO STEMX, but most schools very enthusiastic to know more

Schools

- Some schools already doing STEM activities themselves
 - Several schools looking at future ways to bring science, tech and maths together
- Very low awareness of SATRO doing this
 - The handful that had used it were positive about it adding value
 - Most others (including those already doing something in this area) were **keen to know more** about SATRO's STEMX activities

FE

- Are engaged with STEM:
 - STEM challenges
 - STEM fairs
- See benefits of this approach to engaging people with STEM – making it fun

Employers

- Mixed views
- Some were familiar with the concept (and mentioned STEM Learning)
 - Welcome anything that can make learning fun
- One, unfamiliar with STEM, was more sceptical of the value



Some suggestions it could start with younger children to inspire them

Almost no awareness of SATRO STEMX, most schools very enthusiastic to know more



Not heard of this type of thing. But could particularly benefit the younger ones **School**

We do some of this in science week. It was fun, they built things. Useful for primary & lower secondary, to get the children engaged **School**

Looking at our next academic year we are looking to foster and develop a link between our science, tech and maths depts. **School**

We have STEM lecturers coming in. We did a Disneyland Paris trip, run by the science dept. STEM lectures in the day, Disney after lectures. In my SATRO class, ½ would engage with this ½ would need to be persuaded how it is going to help, where is it going to take me. **School**

I'd like to hear more about this and see what we could develop here...we could have STEM event days, with SATRO providing support for teachers to run events. We are trying to get a co-ordinated view across Tech, Science and Maths – teaching same area in each dept, with each dept addressing their own angle. Is it a programme or a one off? Could it be done by an engineer, coming in to give 4 or 5 lessons? Like an expert in the classroom ? **School**

This looks interesting. We are looking at changing the curriculum so that we can have a day of activities. We have a strong maths, science and computing dept. It could be Something competition/ project based, with people from the world of work would be great **School**

Our science teacher would love this – we'd like to know more. **School**

A big thing everyone is pushing. We do STEM fairs. A good thing to do. School teachers don't have time **FE**

Anyone doing this – it's got to help. Get them to build something, learn teamwork, with engineering and maths 'hidden'. This could be for primary children **FE**

This tends to be 'fun things' – doing activities. Opens their eyes to things like engineering – can start this form around age 12 **Employer**

Good idea. If it's fun, you will remember it – like any learning. **Employer**



Response to SATRO CAD and 3D Printing

Computer Aided Design and 3D printing

Bringing the future into schools, today.

- Current Industry experts deliver a two hour teaching session
- Students explore the breadth of possibilities of modern design techniques
- Students design a 3D product using CAD to predetermined specifications and print a scale model in 3D which they keep
- This service is available to key stages 3 and 4



Almost no awareness of SATRO CAD/3D Printing, but many schools keen to know more

Schools

- Most enthusiastic to know more, including two that have some of these facilities
- One mentioned FunTech camps and courses



FE

- Both FE's shown the concept were enthusiastic about it #
- # concept not available in early interviews

Employers

- Mixed views
 - Some positive as it's the modern way in construction
 - But some not sure about application in their specific trades

Some suggestions it could start children younger than KS3 and KS4

All of them would be up for this. Would be best at a younger age (say 11, 12, 13) as it could influence what else they would need to study if they wanted to follow that path **School**

...would give them exposure to the world of work. Could be different levels of complexity for KS3/4 **School**

We've got a 3D printer that sits untouched due to lack of knowledge and confidence among our staff – this could kick start things **School**

The students would enjoy this. if they've expressed an interest in IT we could do it as a 2-hour workshop. **School**

Our art teacher would love this. The age group is OK – could be younger children as young as 9 would be interested in this **School**

We're competent on this, we have a 3D and CAD suite. But interested in what they can deliver – as industry experts not just our teachers **School**

Wish List.. what else could/should SATRO do?

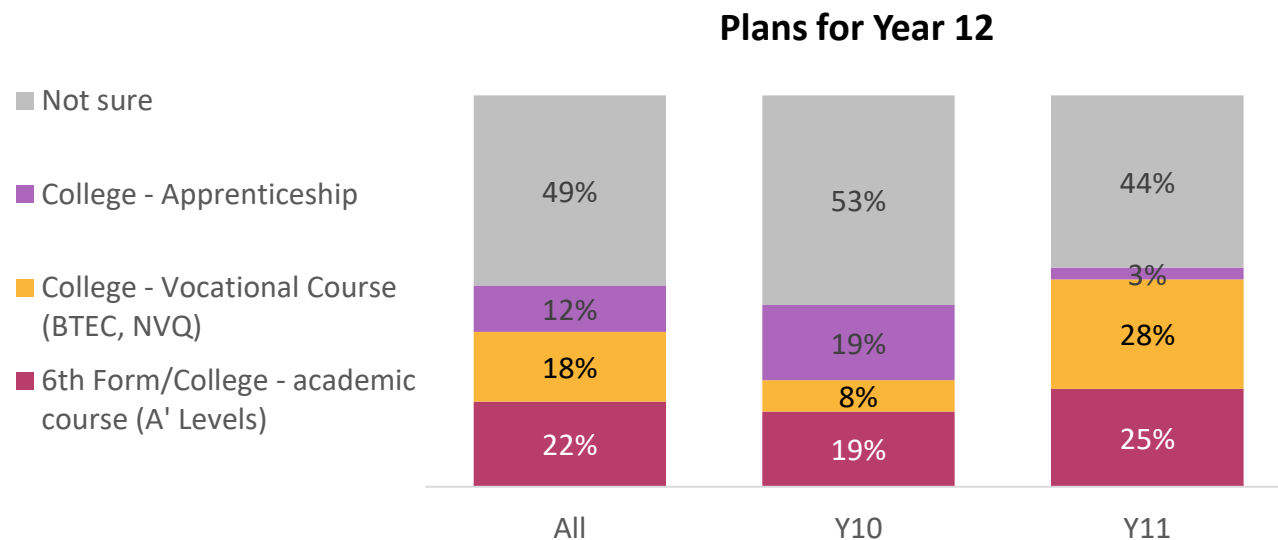
Communicate with us: tell us what they do and offer!

- ▶ **Offer other areas of learning towards work**
 - Jewellery Making, Textiles, Graphic Design, Mosaics, Food & Nutrition, Environment & Conservation
- ▶ **Do more to engage females:**
 - Include subjects more likely to appeal to them
 - Offer female only projects in schools
- ▶ **Consider the ages covered**
 - Engage children at a younger age: offer (some of) these ideas to younger pupils
 - One off sessions and taster sessions here and there to gain interest with years 8 and 9
 - Some A level students could do SATRO Mobiles - give them practical skills that they lack.
- ▶ **Activities with broader reach**
 - We need to focus everyone on getting ready for the world of work
- ▶ **Raise awareness of STEM**
 - Inform on STEM jobs for the future - like those related to CAD (*Was done by AQA but will be stopped*)
 - Provide support for teachers to run STEM event days
- ▶ **Raise awareness & educate pupils, parents, schools about construction:** wider than just trades
 - Could use school assemblies and parent events *'schools choose what they cascade to parents'*
 - **Facilitate sessions for industry to talk to groups of pupils**
- ▶ **Have stronger links with FE**
 - Collaborate with us
 - Come in and see what we do in FE, we could look at what they do and see if we have any advice

Appendix

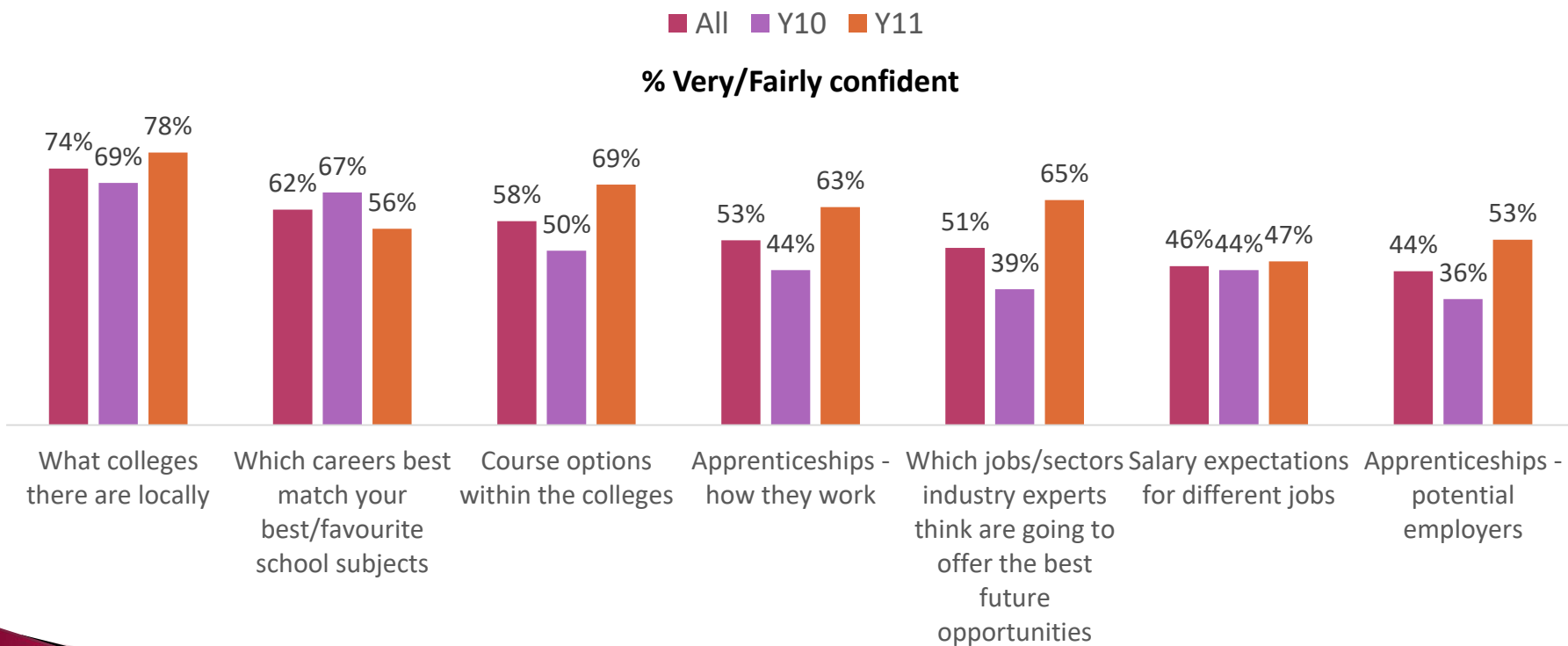
Appendix

Q12. What are your plans for year 12? Base: 68



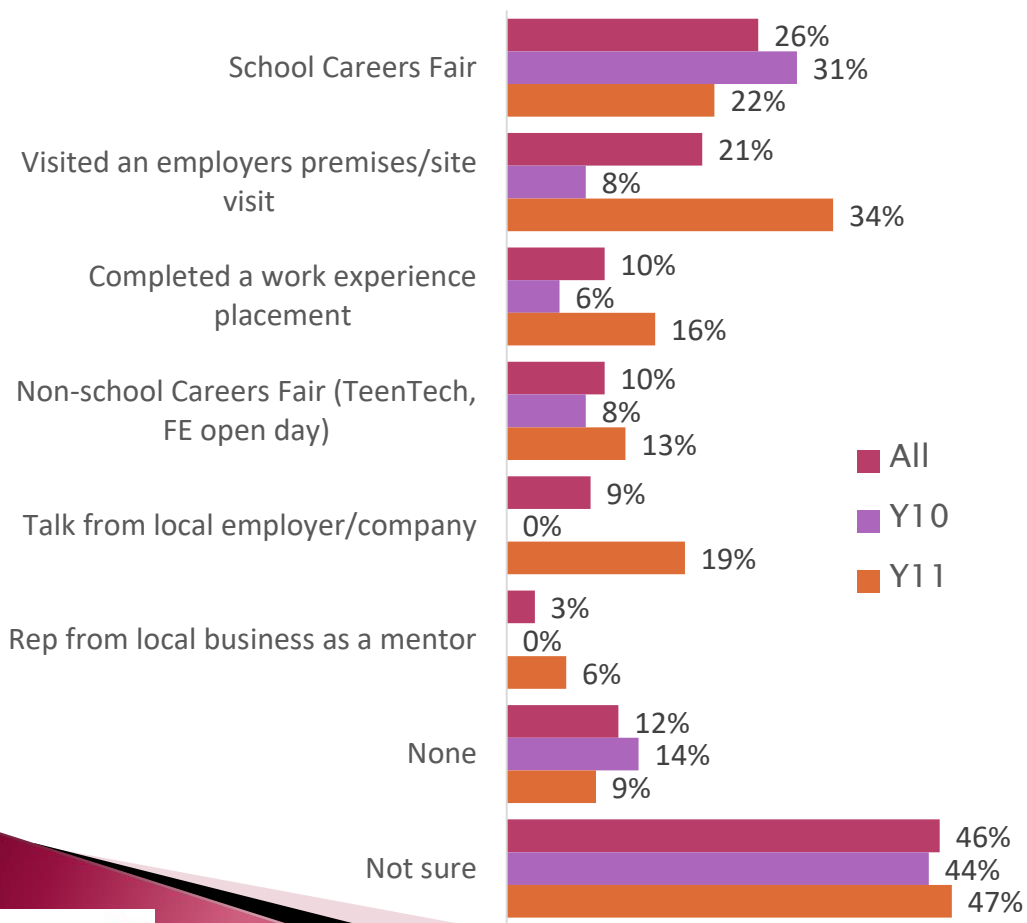
Appendix

Q3. How confident do you feel you know enough about the following things? Base: 68

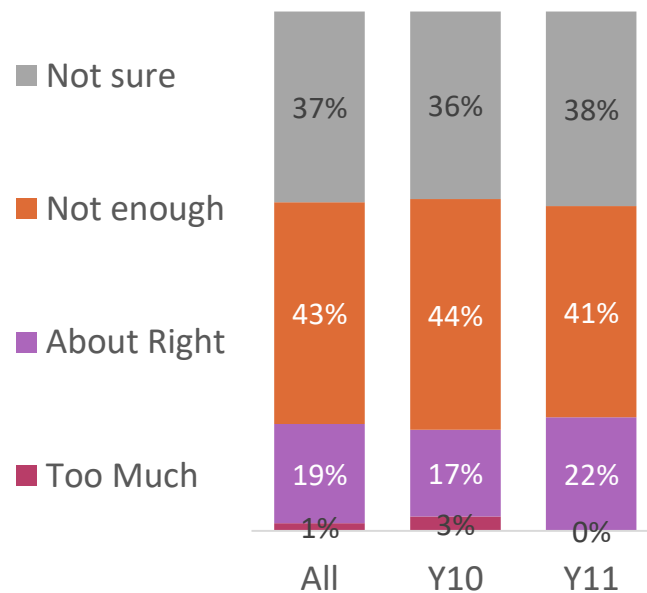


Appendix

Q6. What interaction, via school, have you had with local employers in the last year? Base: 68



Q7. Would you say the number of opportunities you have had to engage with employers was: Base: 68



Appendix

Q10. Who else have you asked for advice about what to do after leaving school? Base: 68

